olivetti

Servizio Tecnico Assistenza Clienti

Communication Terminals

Te 318

ADJUSTMENTS

No. 1639

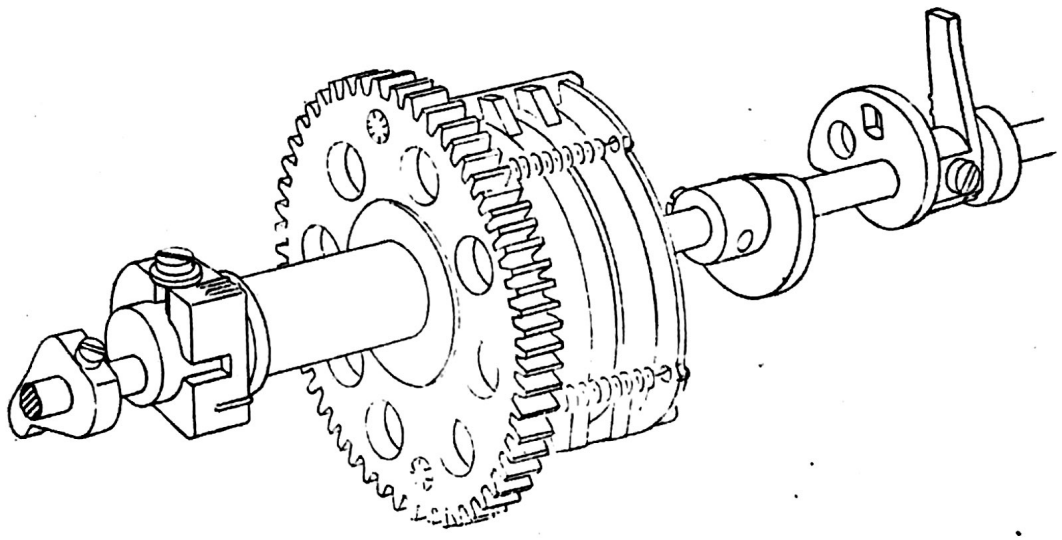
INDEX

Foreword

This volume only explains the adjustments of model Te 318 which differ from those of model Te 315. The adjustments common to both models are described in volumes Nos. 1600 and 1613.

Angular position of the receiving shaft cams

Set the cams of the receiving shaft into the angular position as shown in the figure.



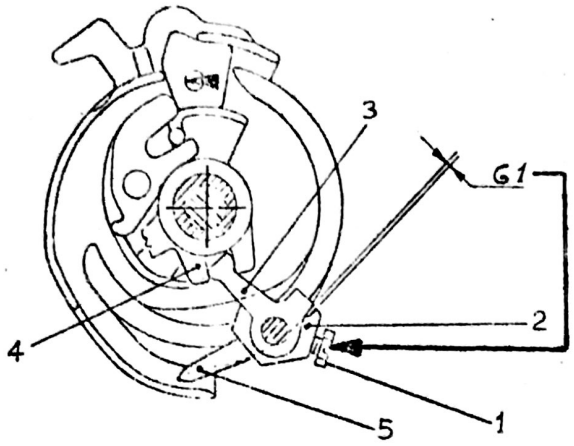
Rocking movement centering of the selection levers with respect to the peak of the selecting disc

Figs A1 - A2

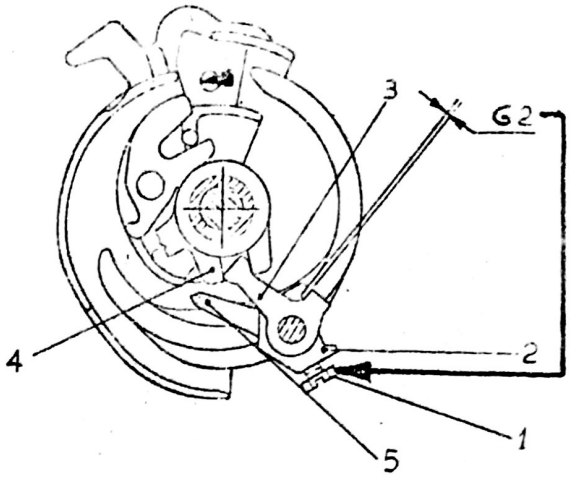
The operations refere to the 1st - 2nd - 3nd - 4th selection lever.
Tighten screw 1 and observe that block 2:
is axially positioned so that lever 3 lies, as far as possible, in the center of sensed lever 4 thickness;
and is angularly positioned so that with the selection lever 5, alternately rocked at its farthest displacement in either directions and in contact with the edge of the selecting disc the two clearances G1 & G2 are approximately equal.

Figs B1 - B2

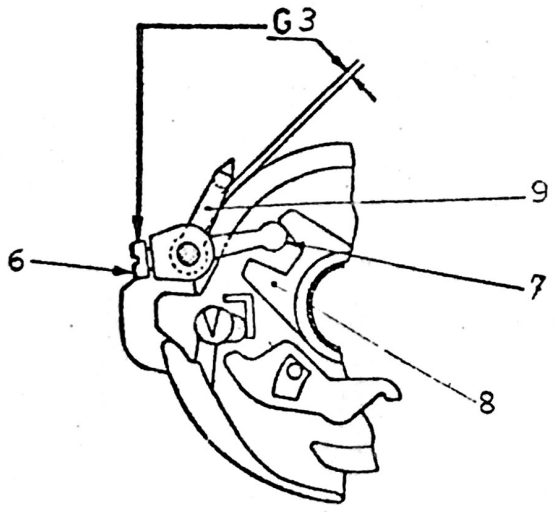
The operations refere to the 5th - 6th - 7th - 8th selection lever.
Tighten screw 6 observing that crank lever 7: is axially positioned so that the same crank lever 7 is, as far as possible, centered with respect to the sensed lever 8; and is angularly positioned so that,with the selection lever 9 alternately positioned in either directions, the two clearances G3 & G4 are approximately equal.



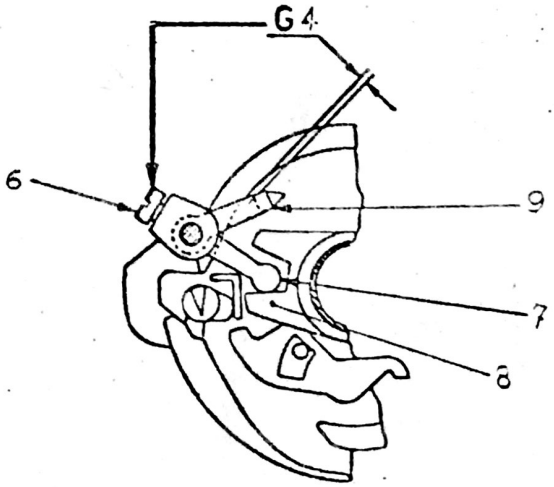
A_1



A_2



B_1



B_2

Magnet armature balancing spring

(a) The hereinafter described adjustment has to be effected with the electromagnet situated in its normal position, that is with the armature located in horizontal position and the neutral-polar control knob turned upwards.

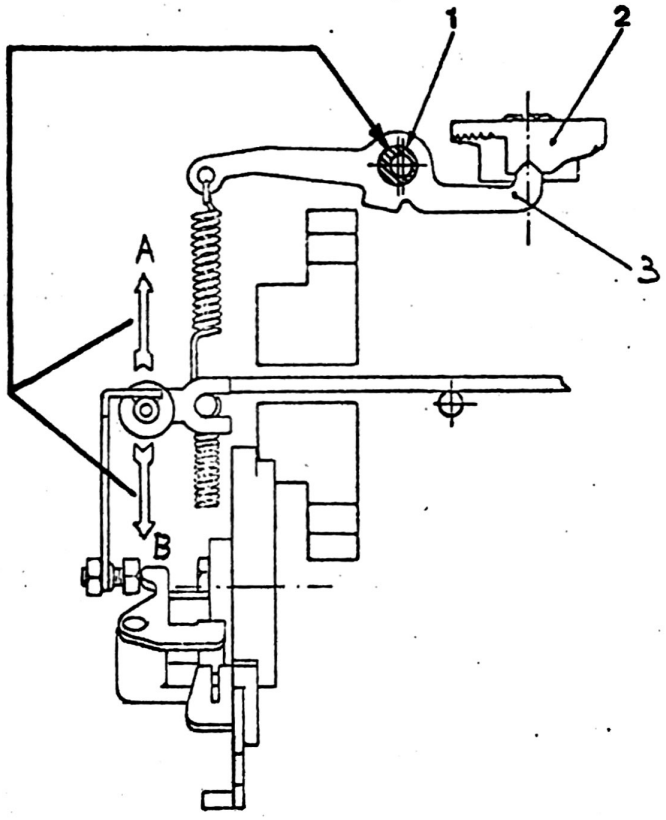
(b) Set cam 2 so as to position arm 3 into its maximum control position, as shown in figure.

(c) Separate the bounce suppressing levers or remove the spring

(d) Rotate the main shaft and set the selecting wedge between the 2nd and the 3rd selecting lever.

(e) Loosen the nut locking eccentric 1 frinction tight and turn this latter so as to locate its eccentricity leftwards (as dicated in figure).

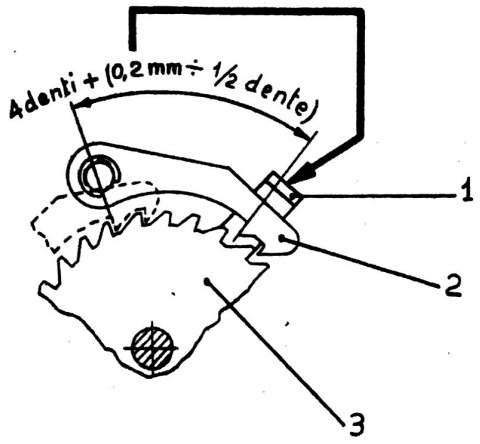
(f) Turn and adjust eccentric 1 so that the magnet forces required to rock the armature in either directions, measured on the armature pin, are the following:


1
2
3
A
B

Time-counter and time-swith pawl stroke

Adjust lug 1 position and set up the length of the pawl 2 stroke so that it results in being:

4 teeth + [0.2 mm (0.008 inch) to 1/2 tooth] through the whole rotation range of ratchet wheel 3. Verify this condition.


4 denti + (0,2 mm ÷ 1/2 dente)
1
2
3

Eccentric of the 1st operation cam groove wheel lever

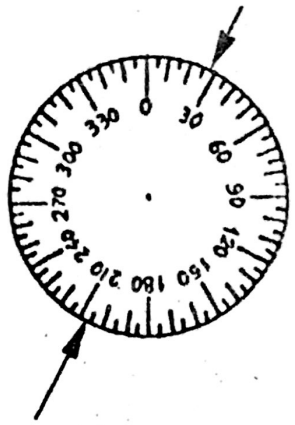
(a) - Set an U or * code combination on the 1st operation setting levers 1.

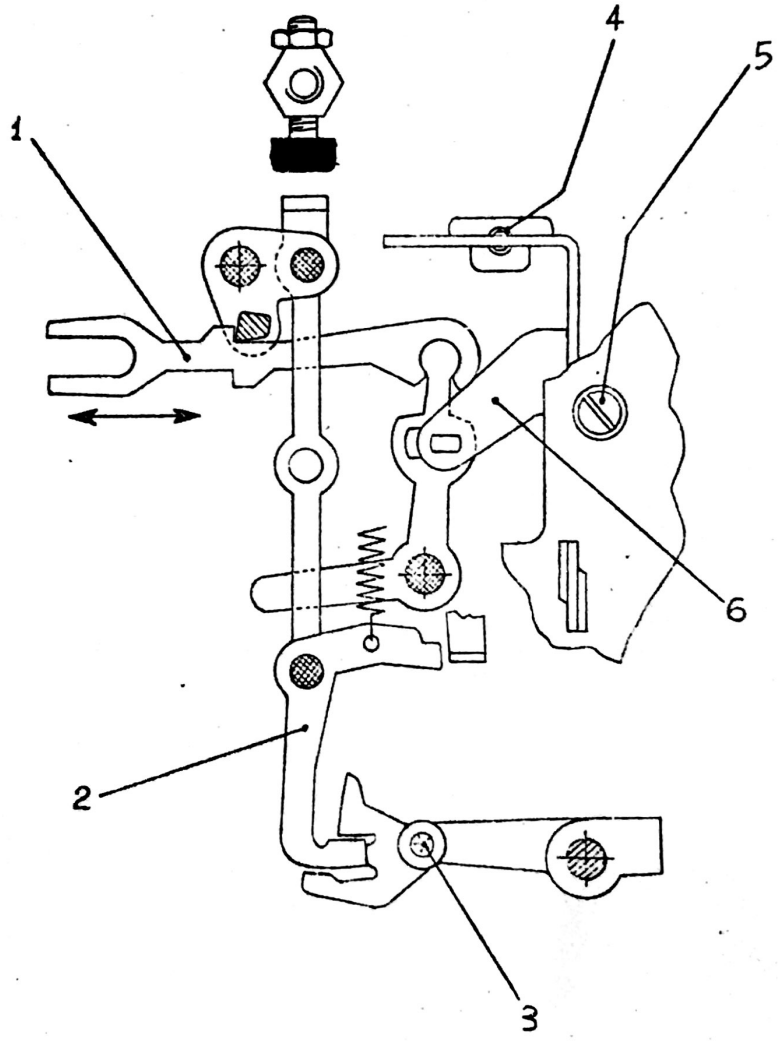
(b) - Trip 1st operation connection angle lever 2.

(c) - Turn the main shaft till the farthest control position of the 1st operation (goniometer at 28° or 208°).

(d) - In this condition make sure that the 1st operation setting levers 1 are allowed to accomplish a 0,05- to 0,15-mm (0.002- to 0,006-inch) overtravel in either direction as shown in figure; ascertain this condition for both mark and space position of the levers.
Should this condition not be attained, suitably adjust eccentric 3.

NOTE - Should the above mentioned clearance not be equally distributed on the levers set in mark and space position, then loosen screws 4 & 5 and suitably modify the position of the group borne by toothed rack 6.


0
30
60
90
120
150
180
210
240
270
300
330


1
2
3
4
5
6

Bar stopping block and 2nd operation eccentric

(a) - Loosen the nut of screws 3 slightly friction tight

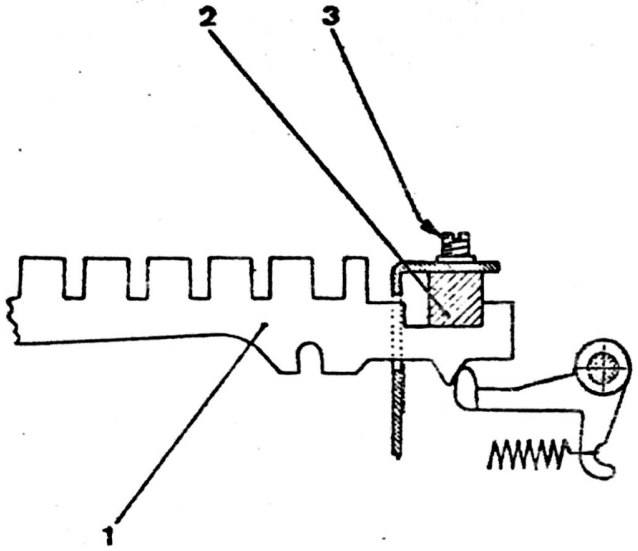
(b) - Rotate 2nd operation eccentric 4 and position it with its eccentricity turned downwards (see detail A). Tighten the nut of said eccentric.

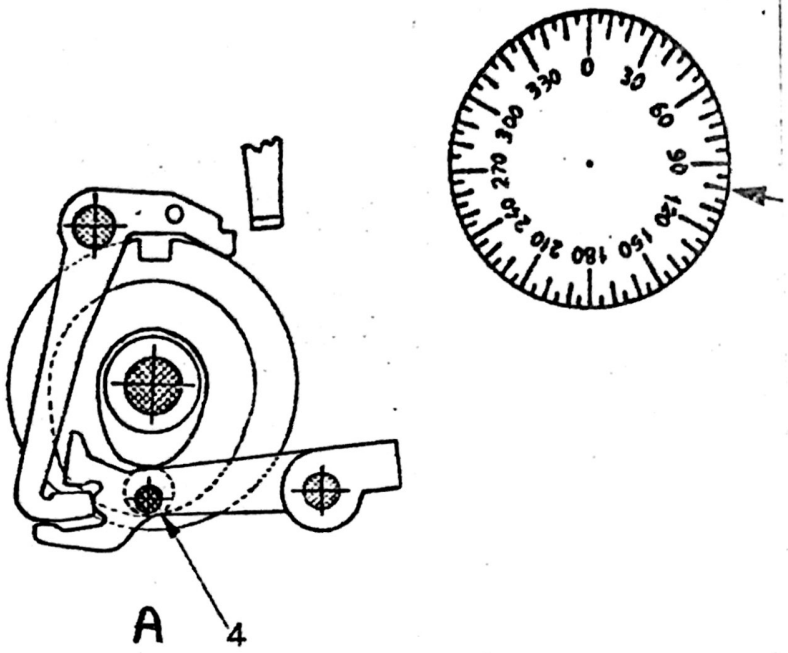
(c) - With the buffer unit at rest, set up an U or * code combination on the 1st operation setting levers.

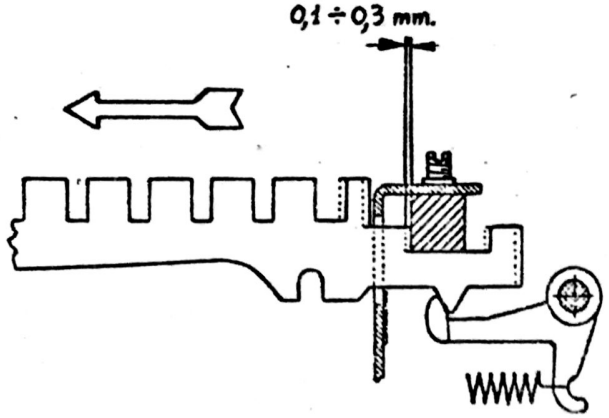
(d) - Trip the 1st operation connection angle lever and rotate the main shaft till the 2nd operation reaches its maximum control position (goniometer at 100° - theoretic 101°)

(e) - In this reached conditions tighten the nuts of screws 3.

(f) - Without modifying the position of the main shaft, suitably rotate eccentric 4; there should be 0,1- to 0,3-mm (0.004- to 0.012-inch) clearance between bar 1 and block 2 (see detail B). Lock the eccentric.







B

Stop screw of the 2nd operation bails

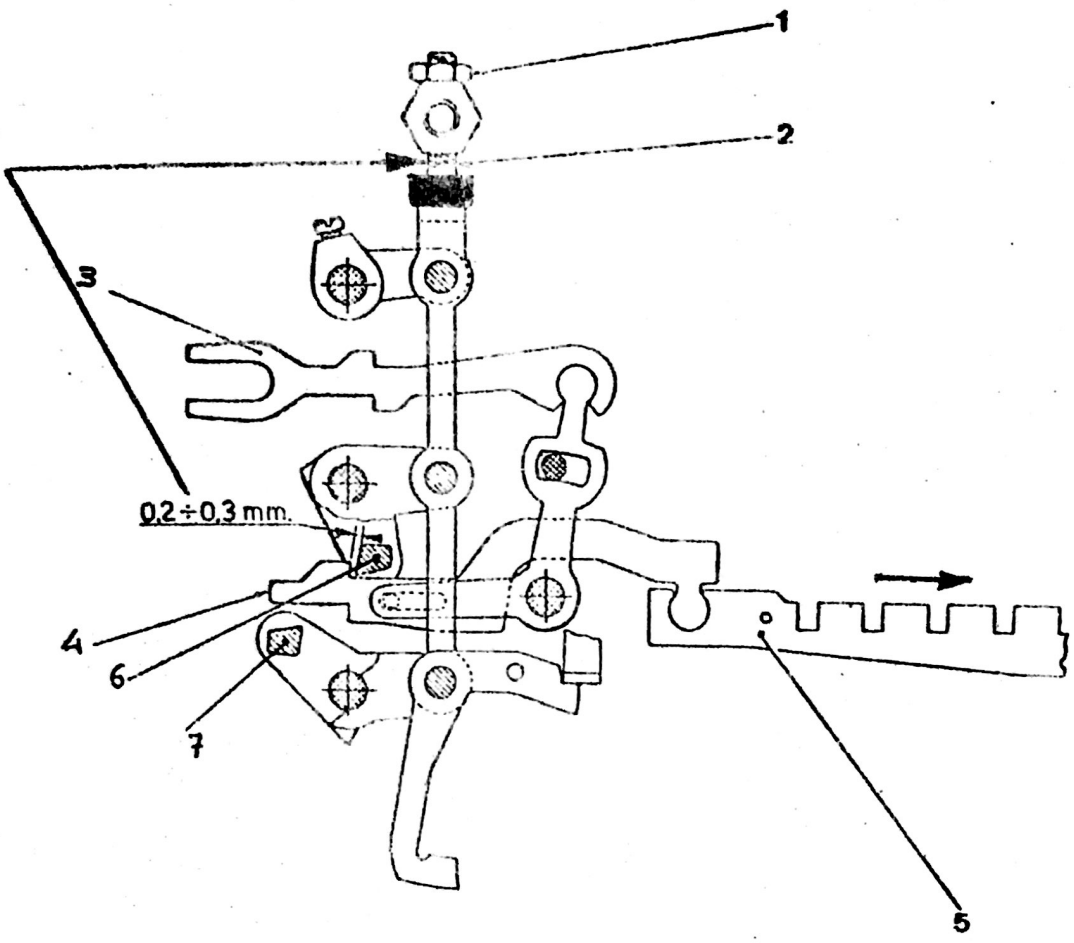
(a) - Set the buffer unit at rest

(b) - Set up a NULL code combination on the 1st operation set - ting levers 11

(c) - Trip connection angle lever 7 and carry out a complete set ting cycle.
Displace now code bars 5 rightwardly by hand as shown in fi gure by the arrow.

(d) - In this condition turn screw 2; there should be 0,2- to 0,3- mm (0.008- to 0.012-inch) clearance between upper bail 8 and the 2nd operation setting levers 10. Then tighten nut 1.

(e) - Ascertain whether the cited clearance really exists between lower bail 12 and the 2nd operation setting levers (see de tail of the figure).
For obtaining this repeat the above mentioned operation by introducing the following modifications:
- (i) - set a code combination DELETE instead of a NULL
- (ii) - reverse the displacement direction of the code bars.


1
2
3
0,2÷0,3 mm.
4
6
7
5

Buffer trensferring control (static adjustment)

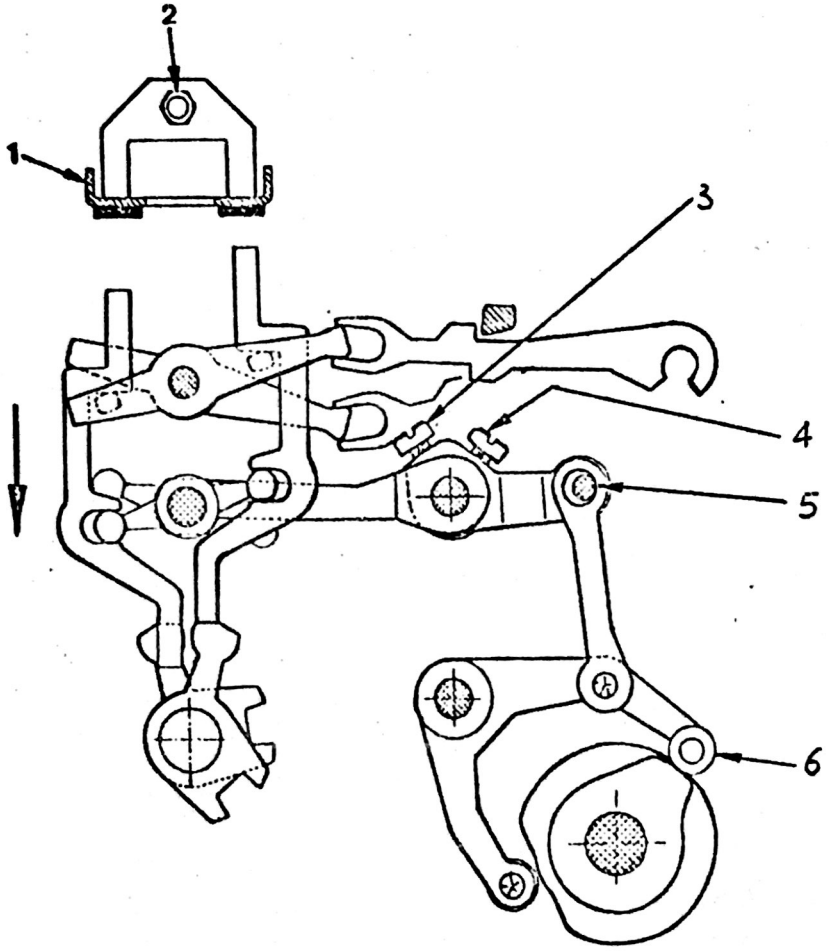
(a) - Position eccentric 9 with its maximum eccentricity turned leftward so as indicated in the detail of the figure. Tighten the lock nut.

(b) - Set the buffer unit at rest

(c) - Position the transverse reset plate 1 downwardly and tighten nuts 2 slightly friction tight.

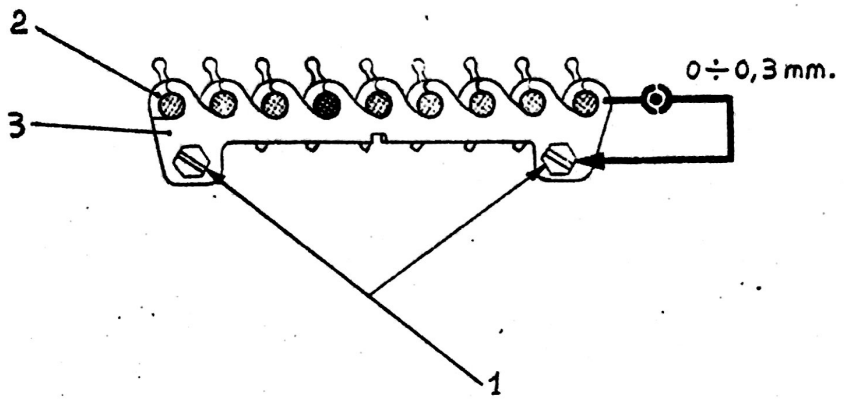
(d) - Trip the receive clutch and rotate the main shaft slowly; set up an **U** or ✱ code on the receive unit
Continue the rotation till unit control lever 11 is brought into its farthest operation position.

(e) - In this condition push the transferring unit cage moderately downwardly in the direction shown in figure; then tighten screws 3 and 4 .


2
1
3
4
5
6

Print vane support plates

Position plates 2 & 3; there should be 0- to 0,3-mm (0- to 0,012-inch) radial play for the print vanes. Then tighten screws 1.


2
3
0÷0,3 mm.
1

Print vane centering with respect to the sensing slides

a) Set function unit to rest

b) Displace the bars 1, 2, 3, 4, 6, 8 to its travel end according to the direction of the arrow B.

c) Insert the arms of the crank levers 9, 10, 11, 13, 15, 16 into the notches of the depending bars and center them with respect to the thickness of the bars themselves. Tighten the screws of said crank levers slightly friction tight.

d) Locate the vanes 19, 20, 21, 23, 25, 26 so that they appear as far as possible in alignment with the sensing slides 17 according to the line B-B (Fig. A). Tighten the screws of the crank levers 9, 10, 11, 13,15, 16.

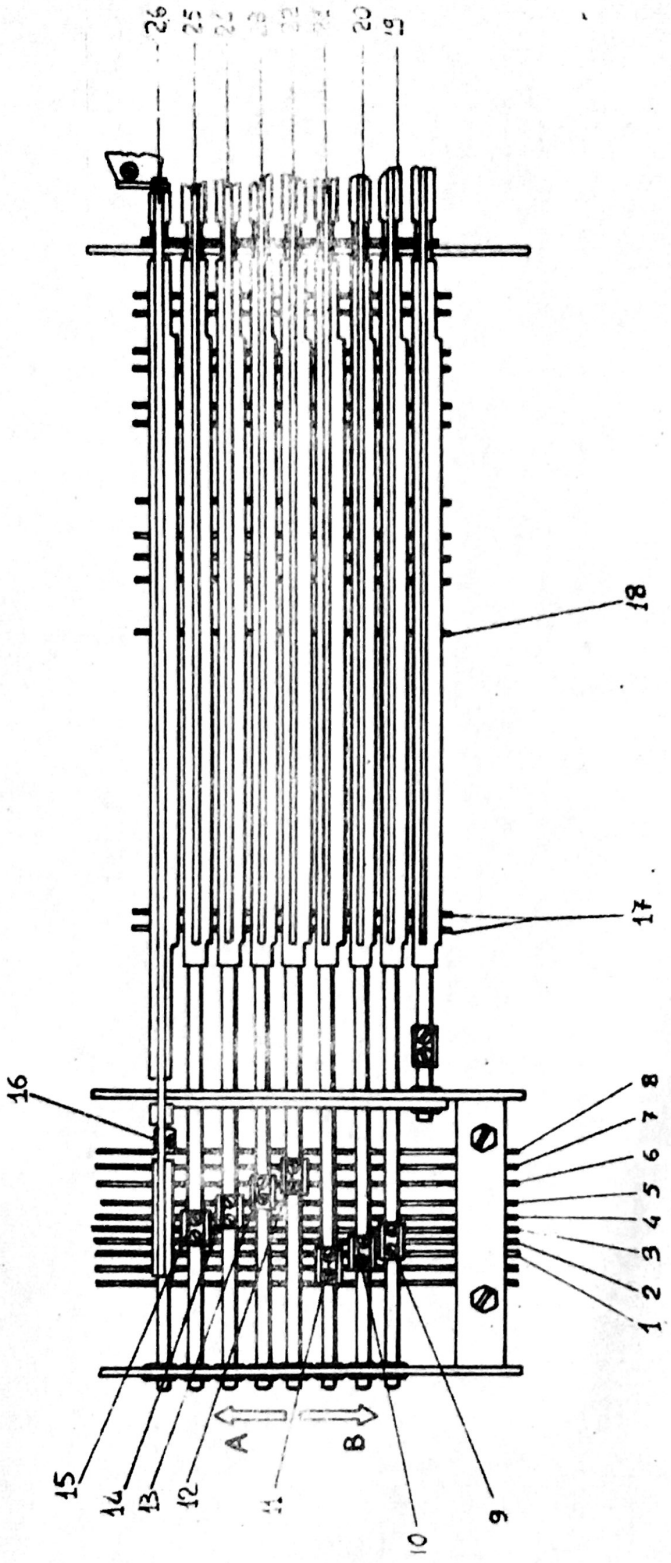
e) Displace now the bars 1, 2, 3, 4, 6, 8 to its travel end according to the direction of the arrow A and ascertain that the vanes 19, 20, 21, 23, 25, 26 are in alignment with the sensing slides 17 according to the line A-A (Fig. A). If this condition cannot be reached so tray to establish a compromised condition namely an intermediate one between the conditions explained at the points (d) and (e).

f) Displace now the bars 5 and 7 to their travel end in the direction of the arrow B.

g) Insert the arms of the crank levers 12 and 14 into the notches of the depending bars and center them with respect to the thickness of the bars themselves. Tighten the screws of the crank levers 12 and 14 slightly friction tight.

h) Position the vanes 22 and 24 so that they appear, as far as possible, in alignment with the sensing slide 18 (space) according to the line B-B (Fig. B). Tighten the screws of the crank lever 12 and 14.

i) Displace the bars 5 and 7 to its farthest travel according to the di-


26
25
20
19
18
17
16
8
7
6
5
4
3
2
1
A
B
15
14
13
12
11
10
9

rection of the arrow A and verify that the vanes 22 and 24 are in alignment with the sensing slide 18 according to the line A-A (Fig.B) If this condition would not be reached so tray to establish a compromised condition, namely an intermediate one between the conditions explained at the points (h) and (i).

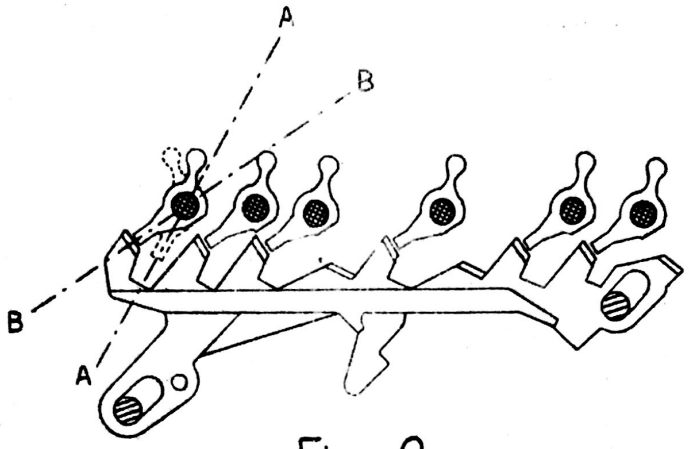


Fig. A

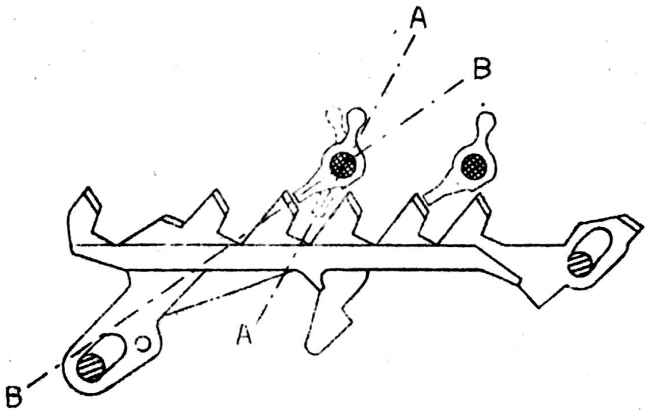


Fig. B.

Main sensing control eccentric of the function unit

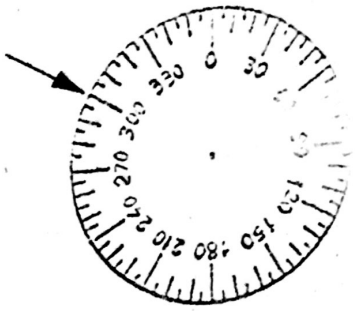
a) Set the function unit at rest

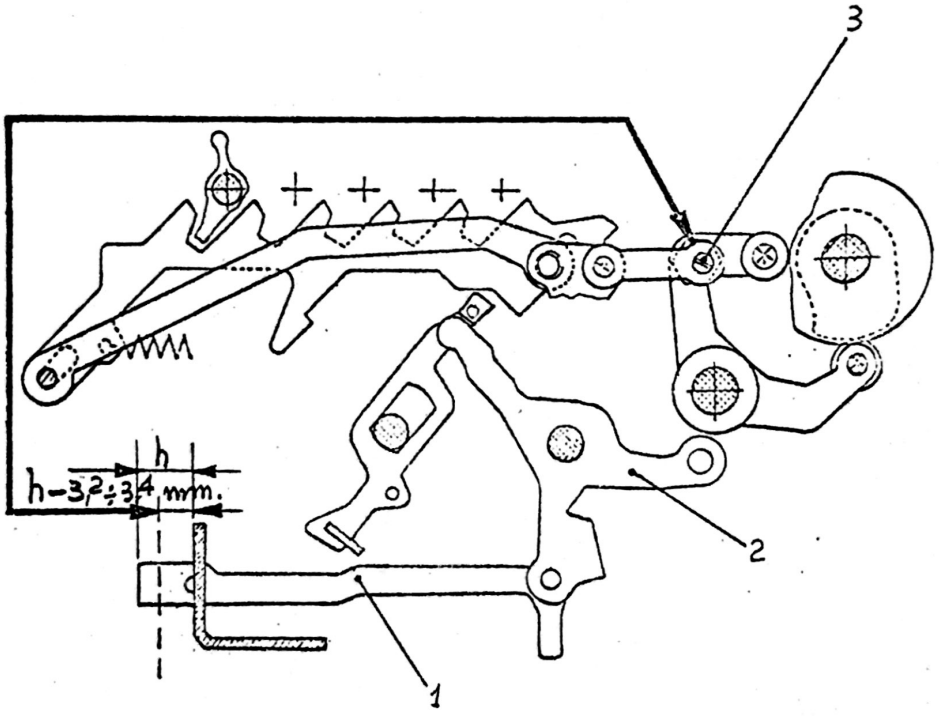
b) Set up the LINE FEED code combination on the vanes.

c) Read the dimension "h" shown in figure appearing between the end of link 1, connected to actuator 2, and the stationary transverse member.

d) Engage the function unit clutch. Rotate the main shaft of the ma - chine and set it at approx. 300° of the goniometer. Read again dimension "h" which should be reduced by 3,2 to 3,4 mm. (0.126 to 0.130 inch) wit respect to the prior one.
Should this condition not be attained, so turn eccentric 3 and reach the prescribed state.

Ascertain the existence of the above mentioned conditions by setting up a code combination ENQ.


0
30
60
90
120
150
180
210
240
270
300
330


3
h
h-32÷34 mm.
2
1

Eccentric of the function suppression latches

a) Set function unit at rest.

Set on the print vanes any of the following code combination:

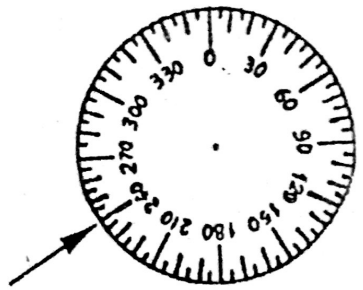
CR - LF - VT - BEL - FF - DEL - SO - SI - BS - ENQ

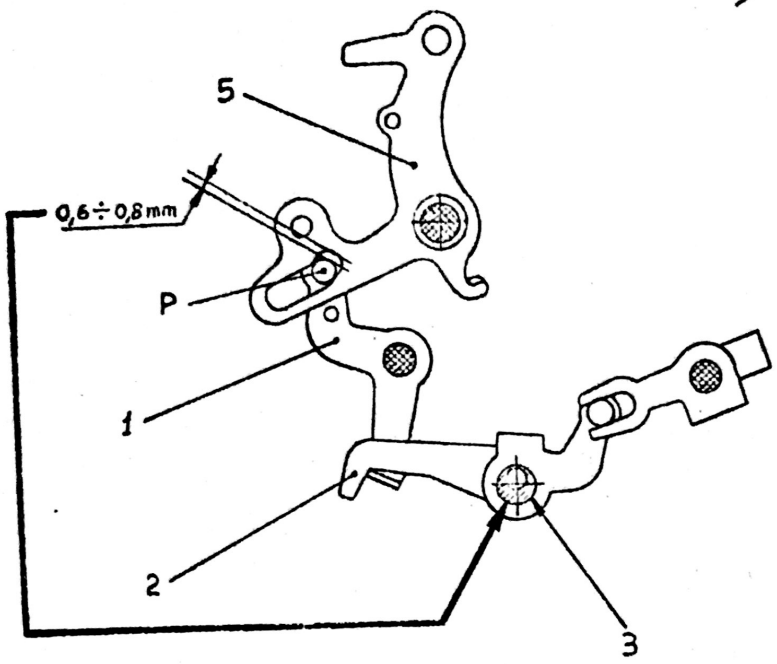
b) Engage the function unit clutch, rotate the main shaft of the machine and set the goniometer at 240° (namely at the point whereat is commencing the control portion of the function cam - theoretic 238°)

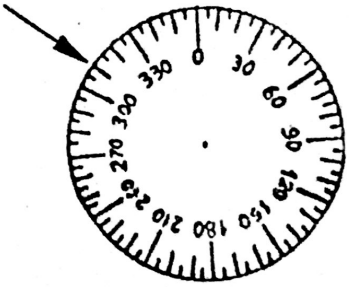
c) In this condition suitably position eccentric 3; pin P of levers 1 should clear the slot end edge by 0,6 to 0,8 mm (0,025 to 0,030 inch). Tighten the screw of eccentric 3.

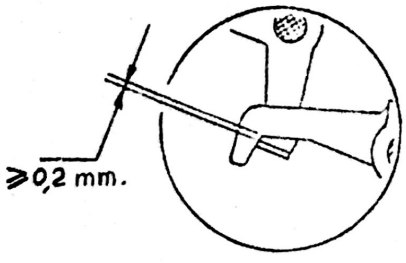
d) Set the goniometer at approx. 310°; there should then be some clearance, $\geqslant$ 0,2 mm (0,008 inch), between latches 2 and the turned-over end portion of levers 1 (see detail A). If this condition should not be obtained, revise the clearance adjusted at point (c).

e) Ascertain the above named clearance amounts even for lever 1 related to the perforator switch-off mechanism, by setting up the combination ENQ on the printing vanes and by displacing the two-color vane into "receive" position.


0
30
60
90
120
150
180
210
240
270
300
330


5
0,6÷0,8mm
P
1
2
3


0
30
60
90
120
150
180
210
240
270
300
330


≥0,2 mm.

A

Phase relationship of the selection racks with the print wheels

a) Bring the following characters of the print wheel onto the printing axis:

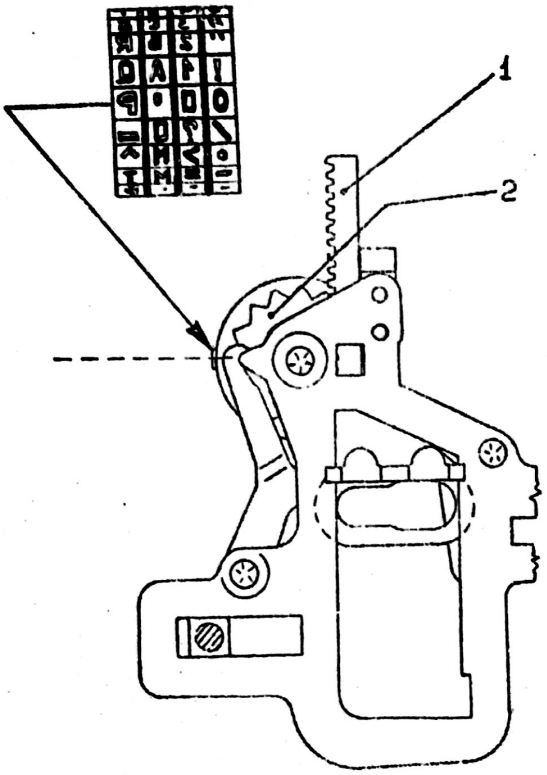
- for the first wheel (54) (*)
N for the second wheel (53)
< for the third wheel (52)
O for the fourth wheel (51)

Engage the racks 1 with the corresponding wheels 2 when this condition is obtained.

b) Displace now the racks 1 to their farthest upper travel and make sure that the following characters appear on the printing axis:

P - O O

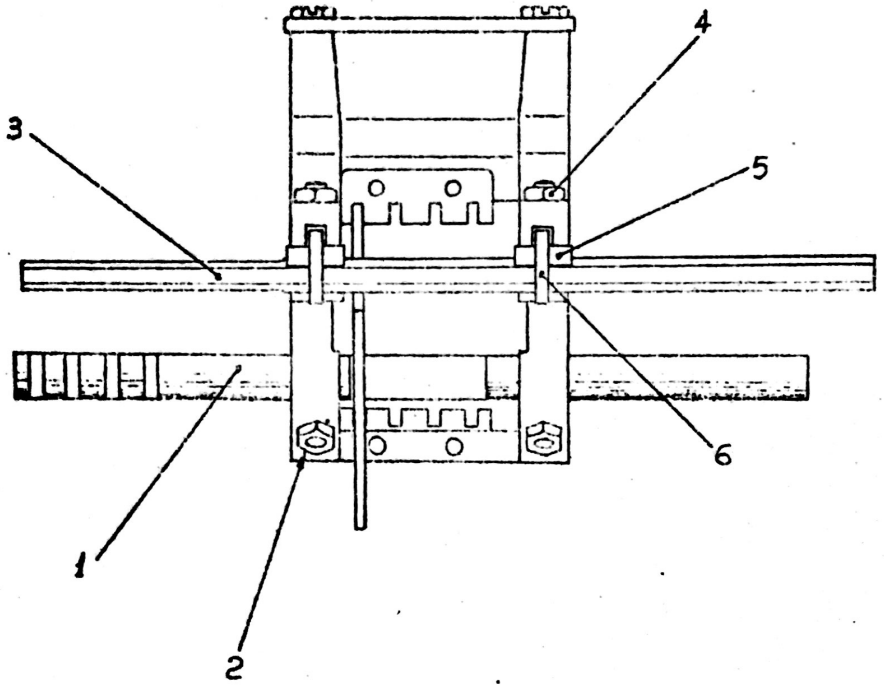
(*) The figures 51, 52, 53, 54 relate to a very small figure engraved on the print wheel rim, between two adjacent characters. Said figures have a recognizing purpose.


1
2

Position of the slide group guides

a) Position guide rail 1 so as to set the first left-hand slide (print wheel 51 into alignment with the square section portion of the guide rail itself. Tighten nuts 2.

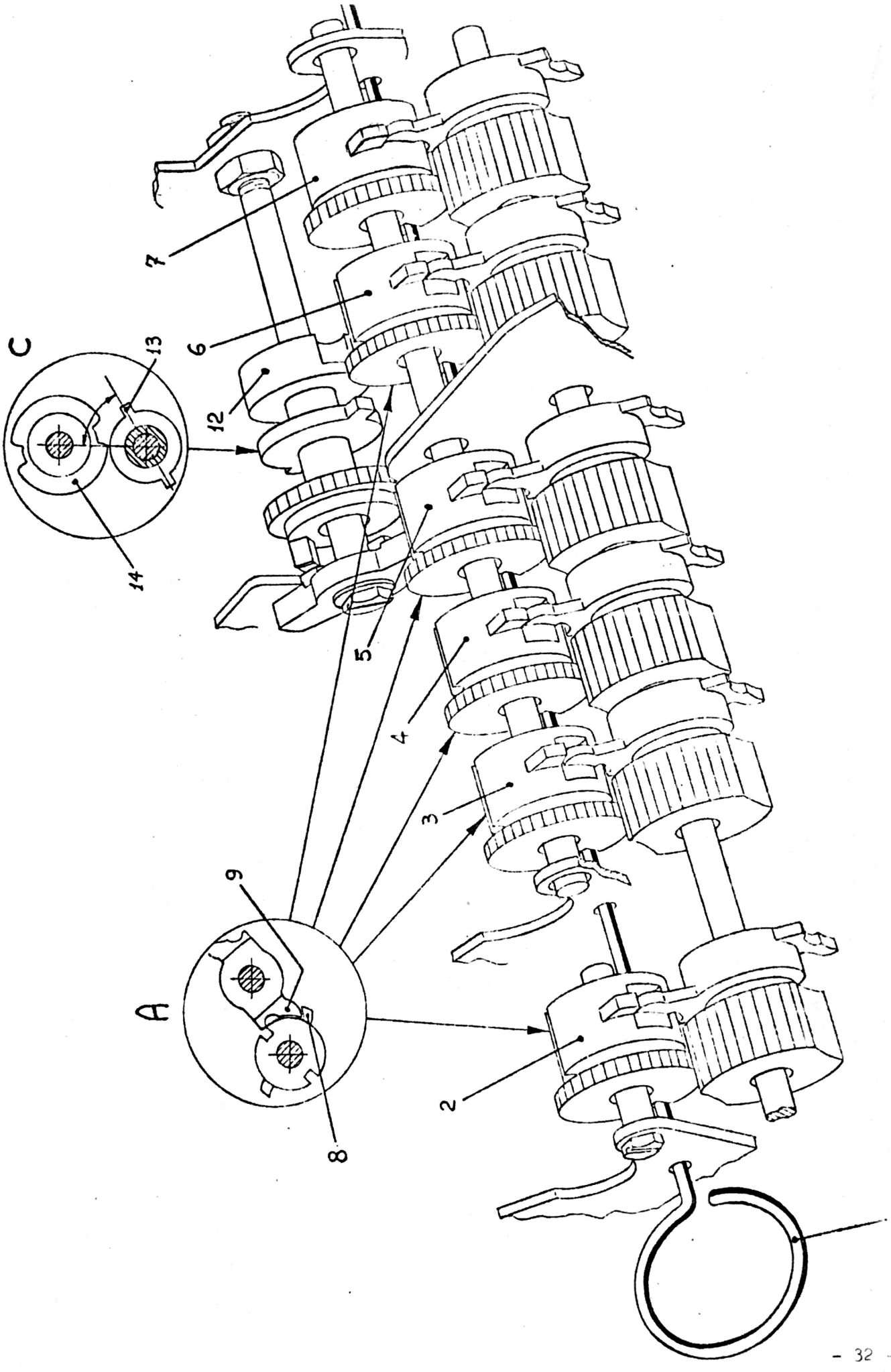
b) Position guide rail 3 so as to set the left-hand side frame of the support into alignment with the flat portion of the guide rail, as best shown in figure. Tighten nuts 4 friction tight making sure that blocks 5 are centered with respect to clamps 6.


4
3
5
6
1
2

Predisposing position of the idlers for the engagement with the driving multi-gear sleeve

a) Position one by one the positions of the following idlers according to the rules herein after singly given and then progressively lock each idler in the reached position by progressively inserting pin-like tool 1, as shown in the figure.
The position of the idlers 2, 3, 4, 5 ,6 ,7 is shown in the detail A, namely each trip tooth 8 should contact each depending position tooth 9.

b) Adjust now the position of printing idler 10; tooth 11 should lag behind the trip recess of rim 12 by three teeth, as shown in detail C.


C
13
14
12
6
7
5
4
3
9
A
8
2

Character selection - Control amount and centering on the printing axis

a) Position connecting rod 1 at its uppermot travel position

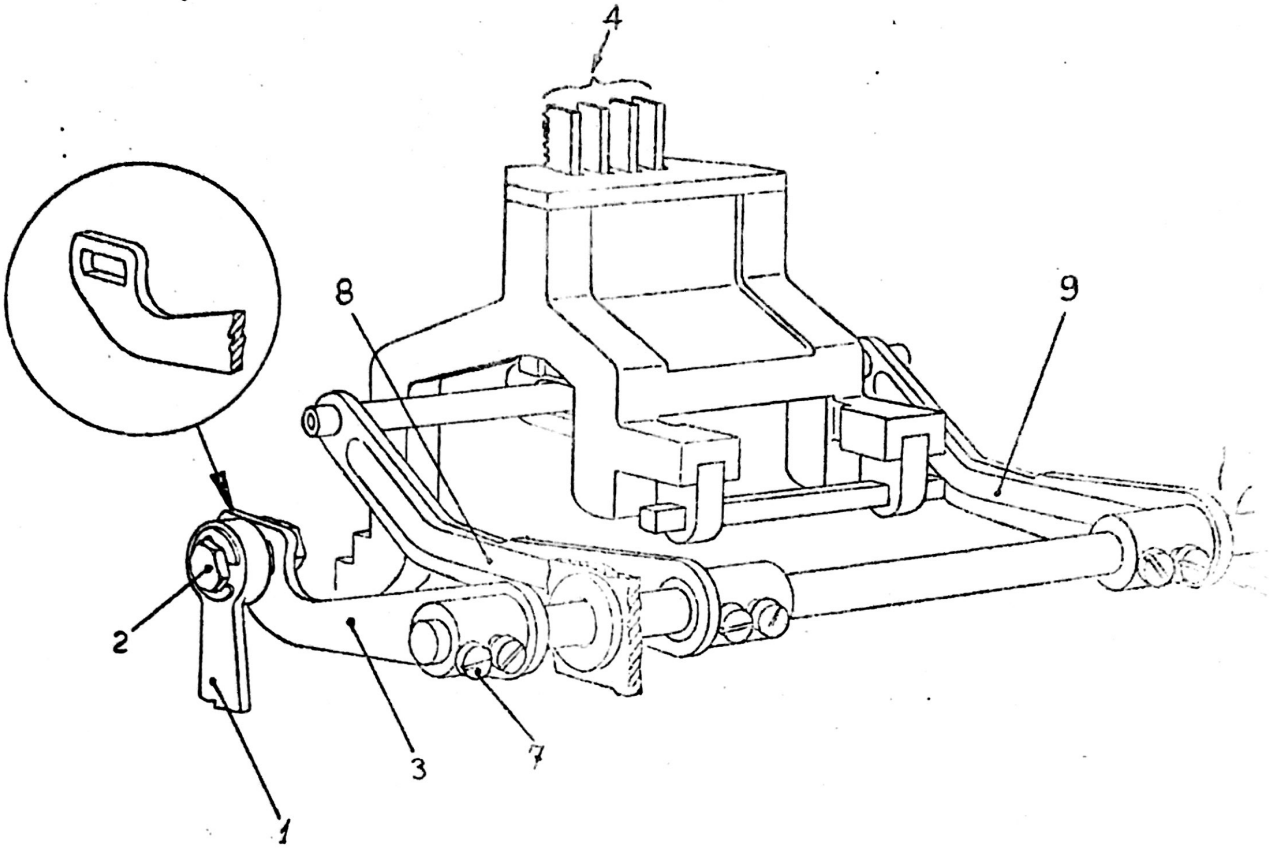
b) Position pivot 2 at the center of the slot of lever 3

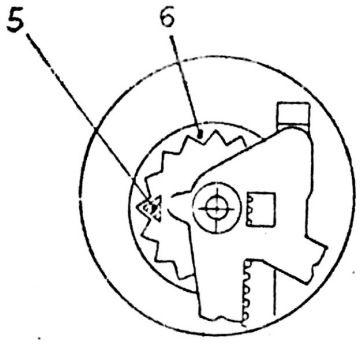
c) Displace the four racks 4 upwards till the following characters appear on the printing axis:

- 0 ? /

At this point refine the angular position of the print wheels so that locking wedge 5 is, as far as possible, central to the recess of toothed crown 6, as best shown in the detail.
Then clamp screws 7.

d) Displace the racks into their lowermost position and first verify the central position of locking wadge 5 over the recess of toothed crown 6; if the total vertical displacement of the racks is longer or shorter than the required one, so revise the horizontal position of pivot 2.
Conversely, if said total displacement is the required one but not in space coincidence with said recesses, so revise the angular position of arms 8 and 9; for this end loosen screws 7.


4
8
9
2
3
7
1


5
6

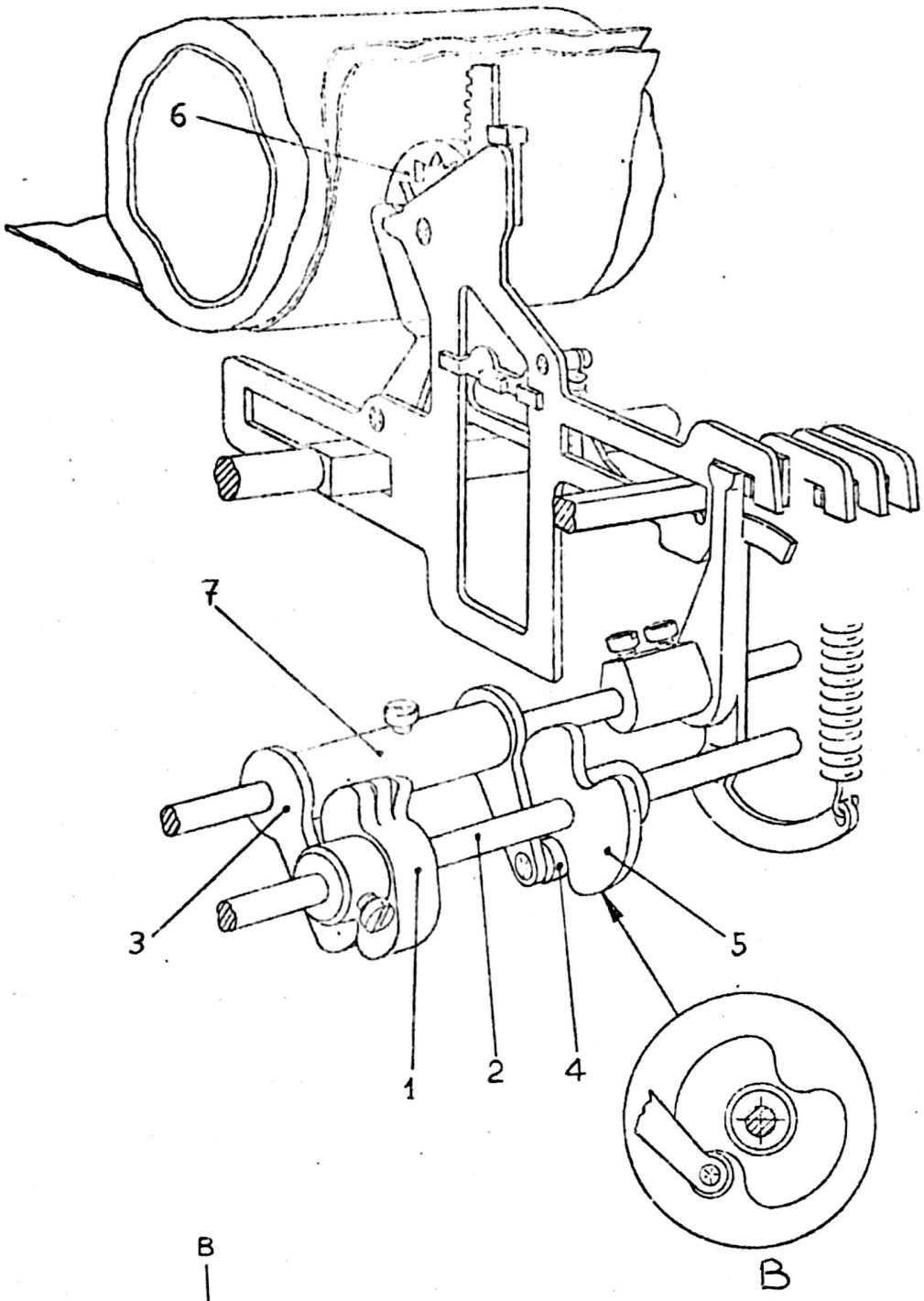
Axial position of the printing and restoring cam

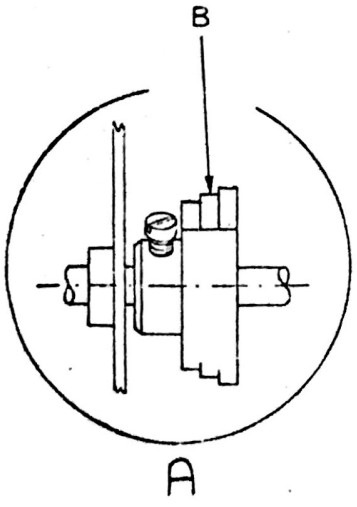
a) Center the edge B of printing cam 1 to the arm 3 of the lever 7 and tighten the screws of said cam on the flat portion of shaft 2. The edge B is clearly defined in detail A.

b) Position roller 4 on one of the lowermost portions of restoring cam 5.

c) Engage the printing clutch idler, rotate the main shaft very slowly and stop the instant print wheel 6 is brought into contact with the platen.

d) Position restoring cam 5 as follows when this condition is reached:
axially - the cam 5 should be central to roller 4; and
angularly - the restoring operation edge of the cam should contact said roller, as best shown in detail B. Tighten the screws of cam 5.


6
7
3
1
2
4
5
B


B
A

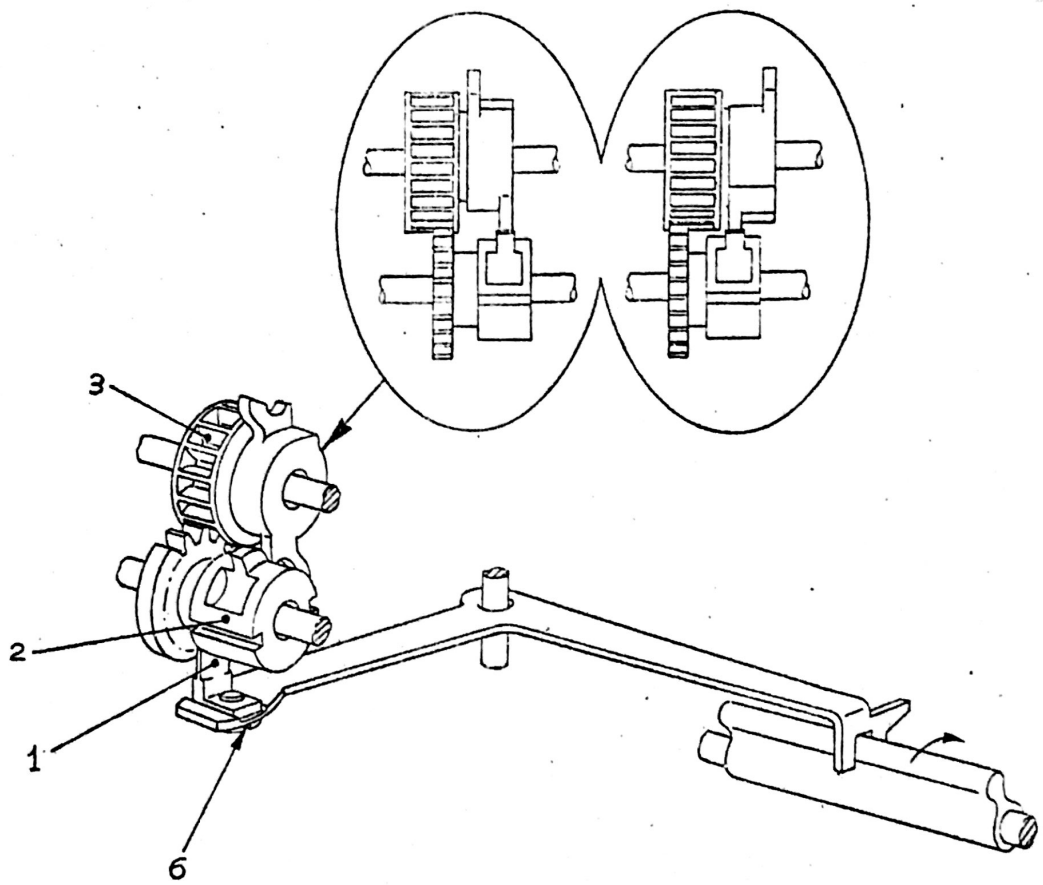
Junction of the angular levers with the vanes

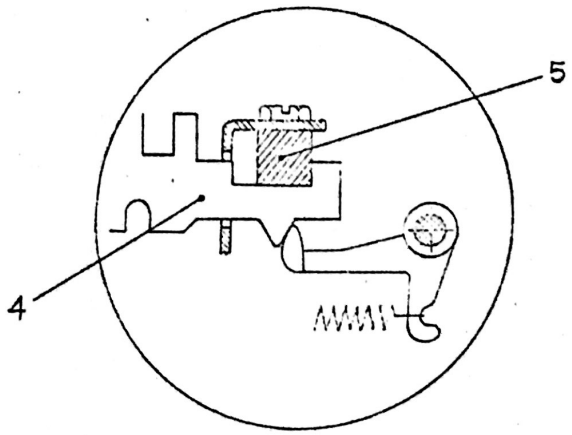
a) Bring the code bars to rest condition

b) Adjust the position of latches 1 so as to bring idlers 2 to bear against the shoulder of driven gears 3, without modifying the bearing condition of transfer bar 4 with respect to stop block 5, as best shown in the detail. Tighten screws 6.

c) Displace the code bars into SPACE position and verify the position of idlers 2 and bars 4, which should be as described at point (b).

The bar 4 should not compress rubber block 5; to adjust, suitably modify the position of latch 1.


3
2
1
6


5
4

Dynamic check of the transferring operation travel

(a) - Turn motor on

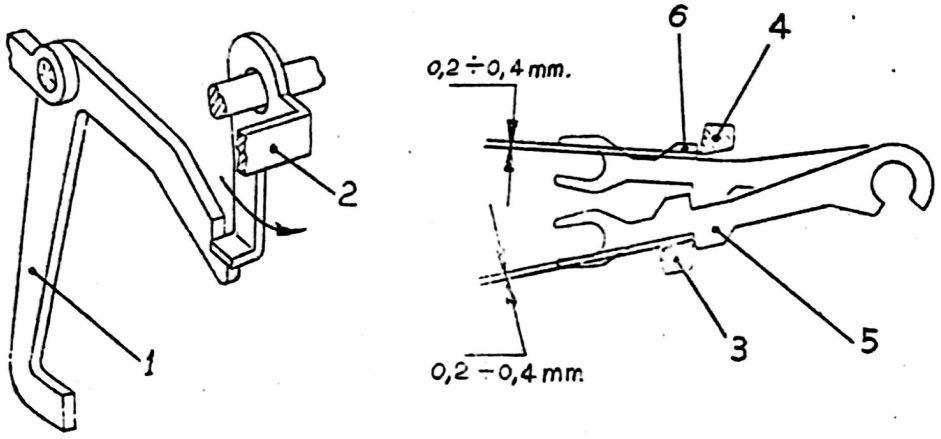
(b) - Send some U-* code combination to the printer

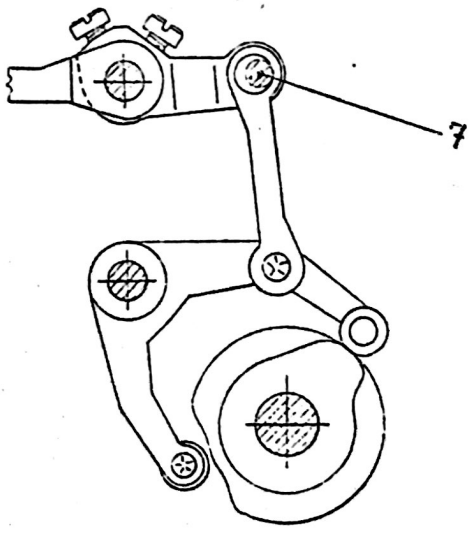
(c) - Stop the motor and disengage 1st connection angle lever 1 by rocking arm 2 in the direction shown in figure.

(d) - Rotate the main shaft and stop it when the bails 3 and 4 bear against the teeth of 1st operation setting levers 5 and 6.

(e) - In this condition there should be 0,2- to 0,4-mm (0.002- to 0.004-inch) horizontal clearance between the 1st operation setting levers and the bails, as shown in figure.

(f) - If necessary, rotate eccentric screw 7 in order to correct the transferring travel.


1
2
0,2 ÷ 0,4 mm.
0,2 ÷ 0,4 mm.
3
4
5
6


7

Locking function of the IN & OUT control arms of the case shift device

a) Loosen screws 1 and 2; position arm 3 axially so that its fore fork-shaped extremity is flush with the edge of the turned-over end portion of swing lever 4, as shown in detail A. At the same time verify that pin 5 and arm 3 reliably engage.

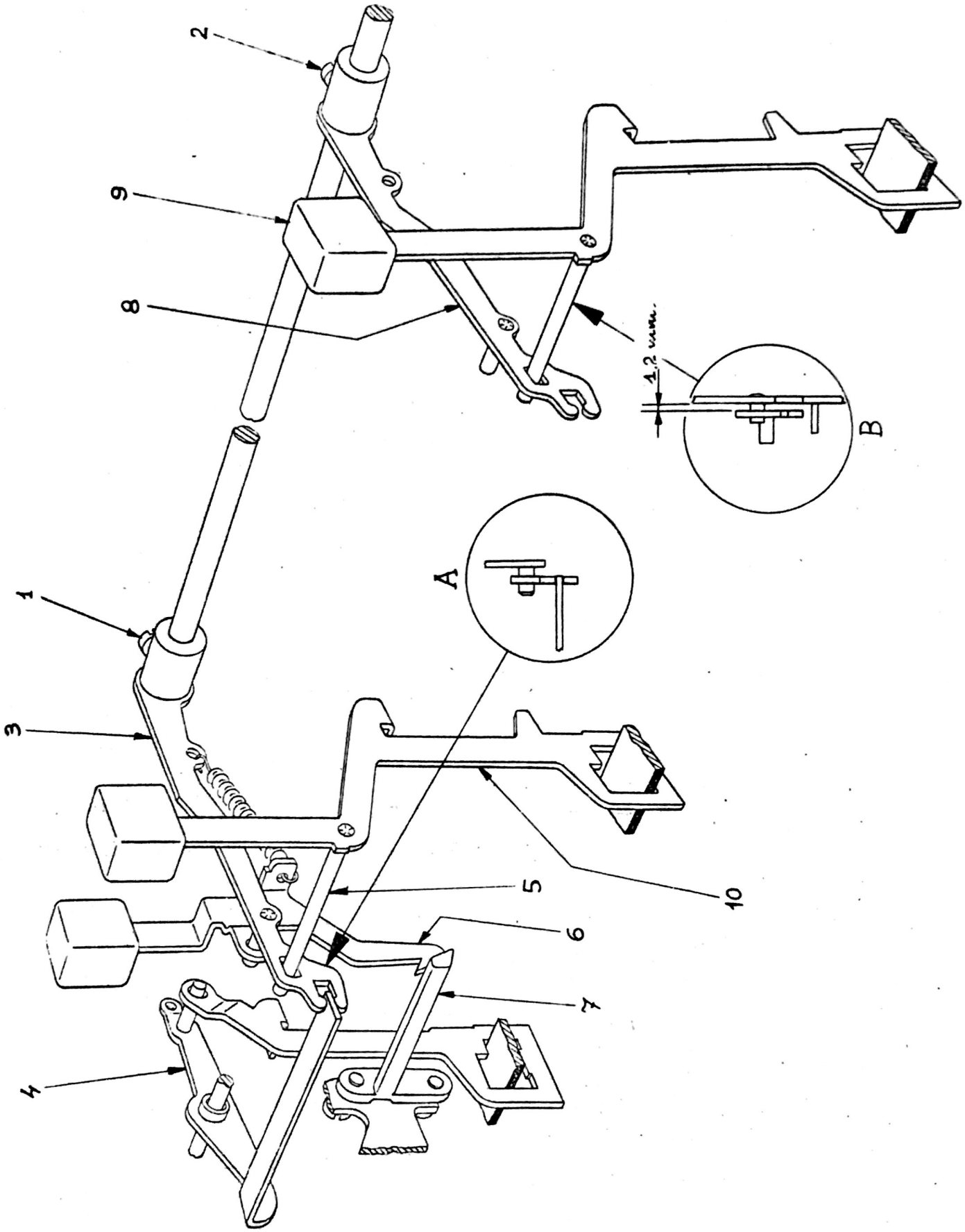
b) Tighten screws 1 when this condition is attained.

c) Ascertain that locking latch 6 engages tooth 7.

d) Position arm 8 axially so that it clears the stem of key 9 by 1,2 mms (0,04 inch), as shown in detail B.

e) Ascertain that stem 10 is stopped by the plastic strip as shown in figure, and then rock arm 8 upwards until the stem of key 9 reaches its upper travel end. Tighten screws 2 when this condition is attained.

f) Ascertain that the whole linkage may be freely moved.

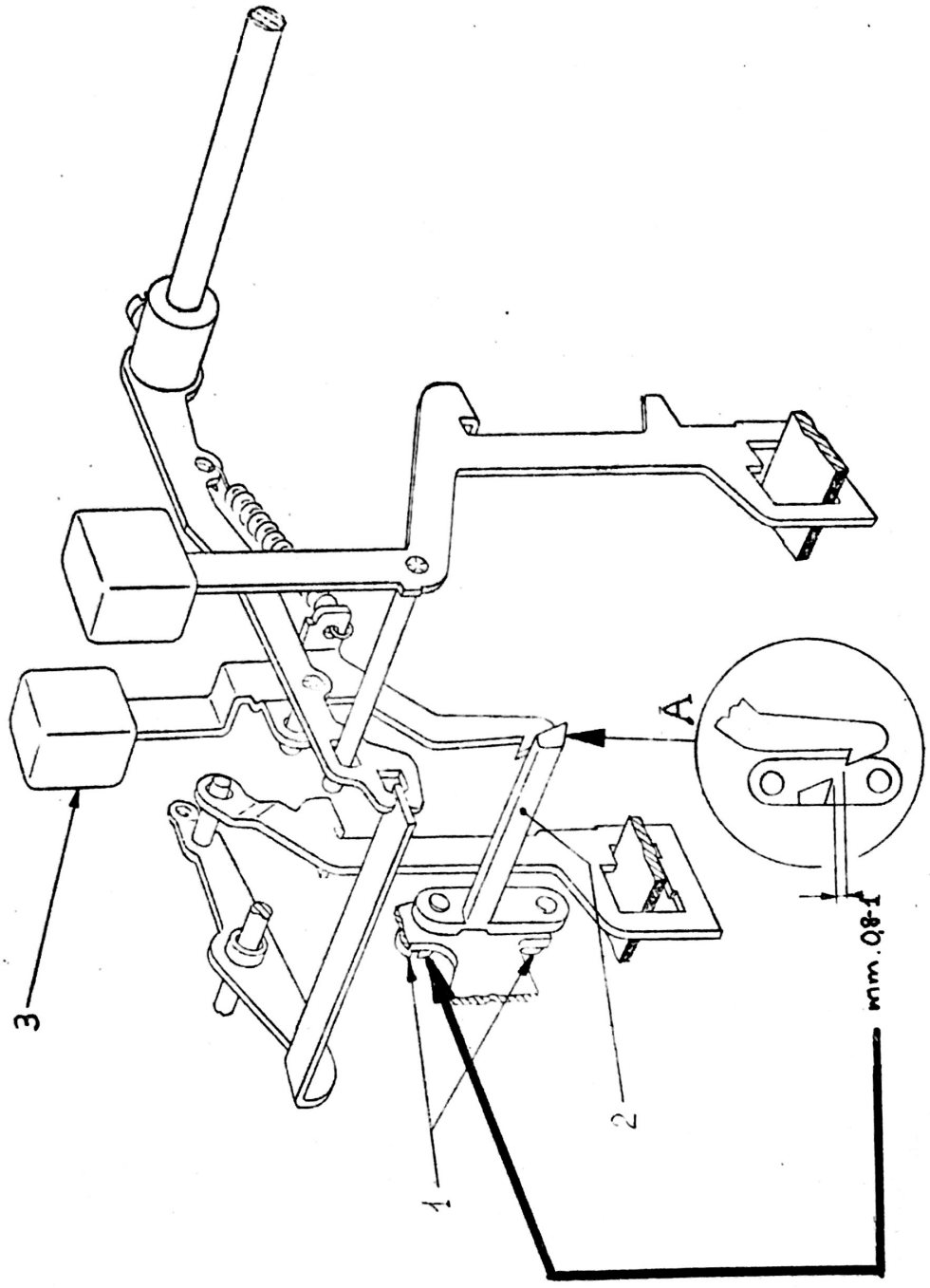

2
9
8
1
3
4
5
6
7
10
A
B
1,2 mm.

Insertion of the locking latch of the case shift device

a) Loosen screws 1 fruction tight

b) Position tooth 2 so that key 3, when depressed till its lower travel end and subsequently released, accomplishes an upward back travel of 0,8 to 1 mm (0,03 to 0,04 inch), as shown in the encicled drawing.

c) Tighten screws 1 when the above mentioned condition is attained.


A
3
1
2
mm. 0,8

Transverse restoring bail

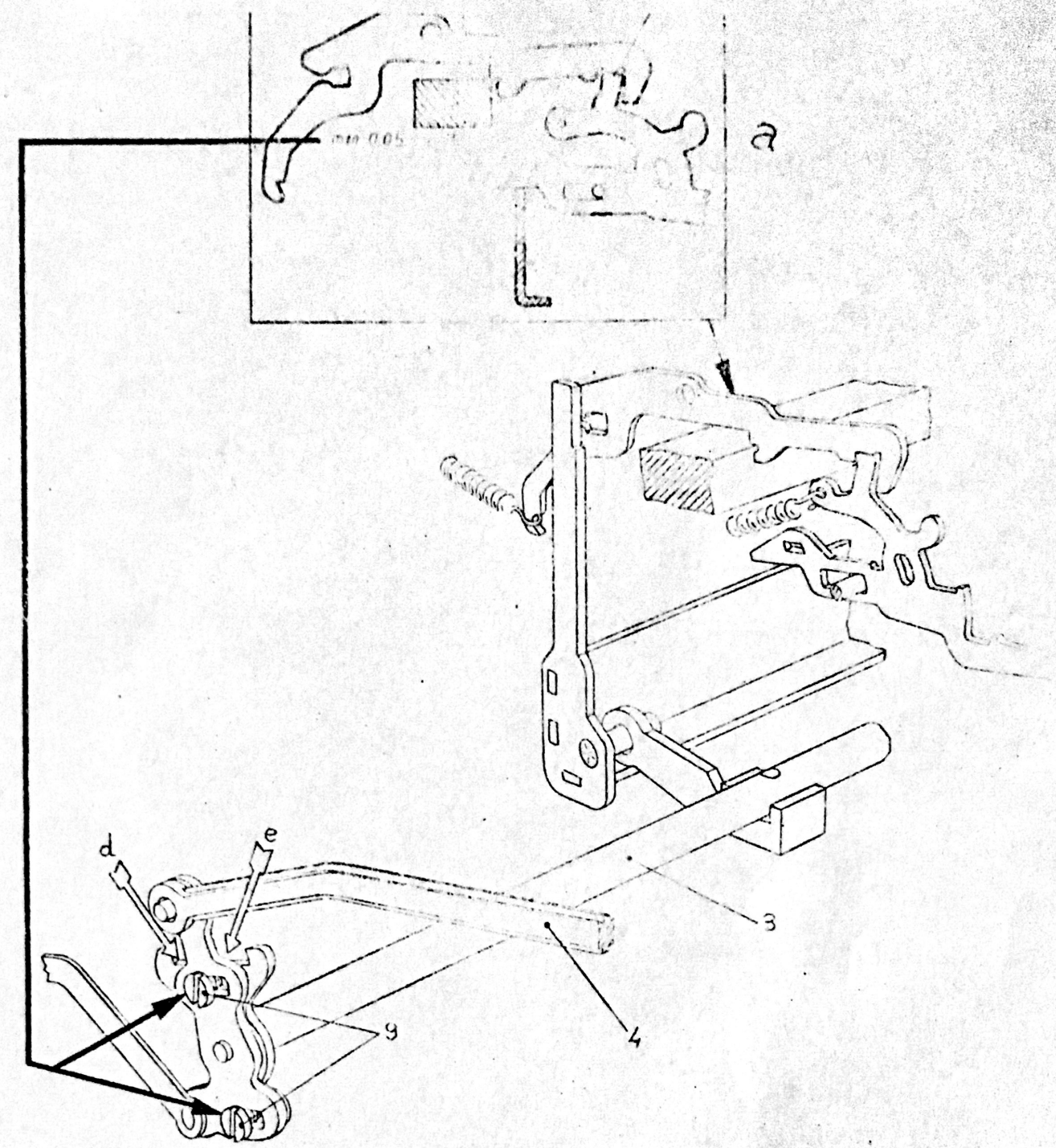
a) Set keyboard locking clutch into "locked position":

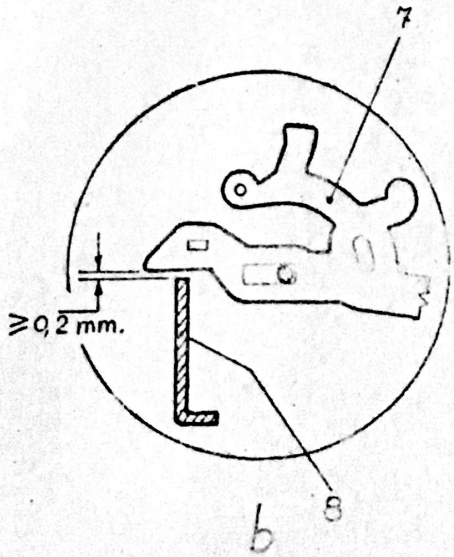
b) Press the check pawl of the named clutch against the lower part of its cam.

c) Modify the angular position of shaft 3 with respect to connecting link 4 by inserting the screw-driver tip on point "d" or "e"; there should be 0,05 to 0,15 mm (0,002 to 0,006 inch) clearance between the step of the left and right-most levers 5 and transverse restoring bail 6 (see detoil A).

d) In these conditions tighten screws 9.

e) Verify as follows: rotate the pawer shaft and set the keyboard locking clutch into "unlocked position". Disengage the setting bail clutch. Push the check pawls of named clutches against the lower part of their cames.
In these conditions depress the shift out and SPACE keys; there should be $\geqslant$ 0,2 mm ($\geqslant$ 0,008 inch) clearance between the released setting levers 7 and the transverse restoring bail 8 (see detail 8).





b

Position of the keyboard assembly

a) Loosen the screws of the four bushings of the keyboard assembly

b) Disengage the setting bail clutch

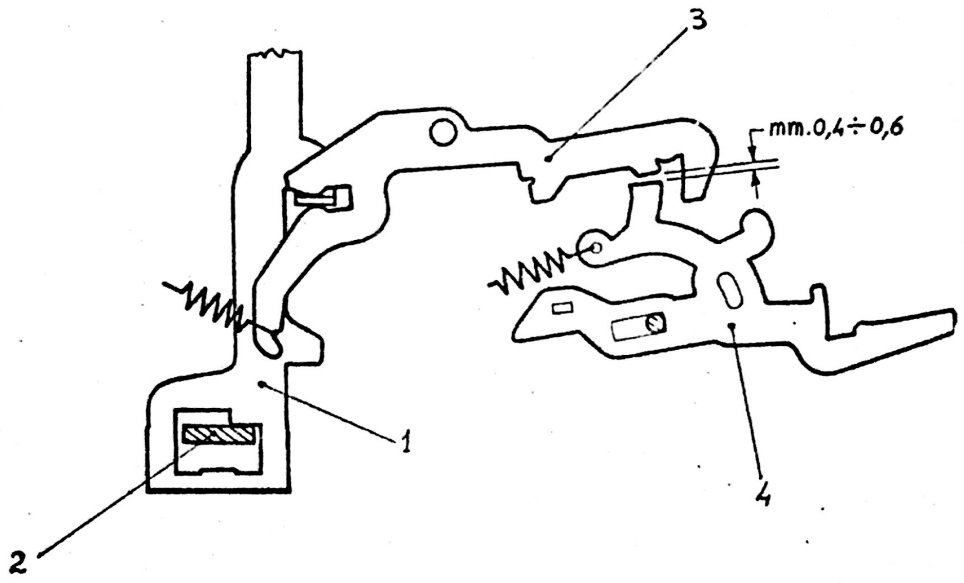
c) Unhook the spring of the key burdening shaft

d) Depress the shift out key moderately till stem 1 is arrested by plastic strip 2

e) In this condition adjust the hight of the keyboard assembly; act upon the two left-side bushings: there should be 0,4 to 0,6 mm (0,015 to 0,025 inch) clearance between tripping lever 3 and setting lever 4.

f) Tighten the screws of the two left-side bushings.

g) Repeate the same adjustment for the two right-side bushings, by depressing the SPACE key.


3
mm.0,4÷0,6
1
2
4

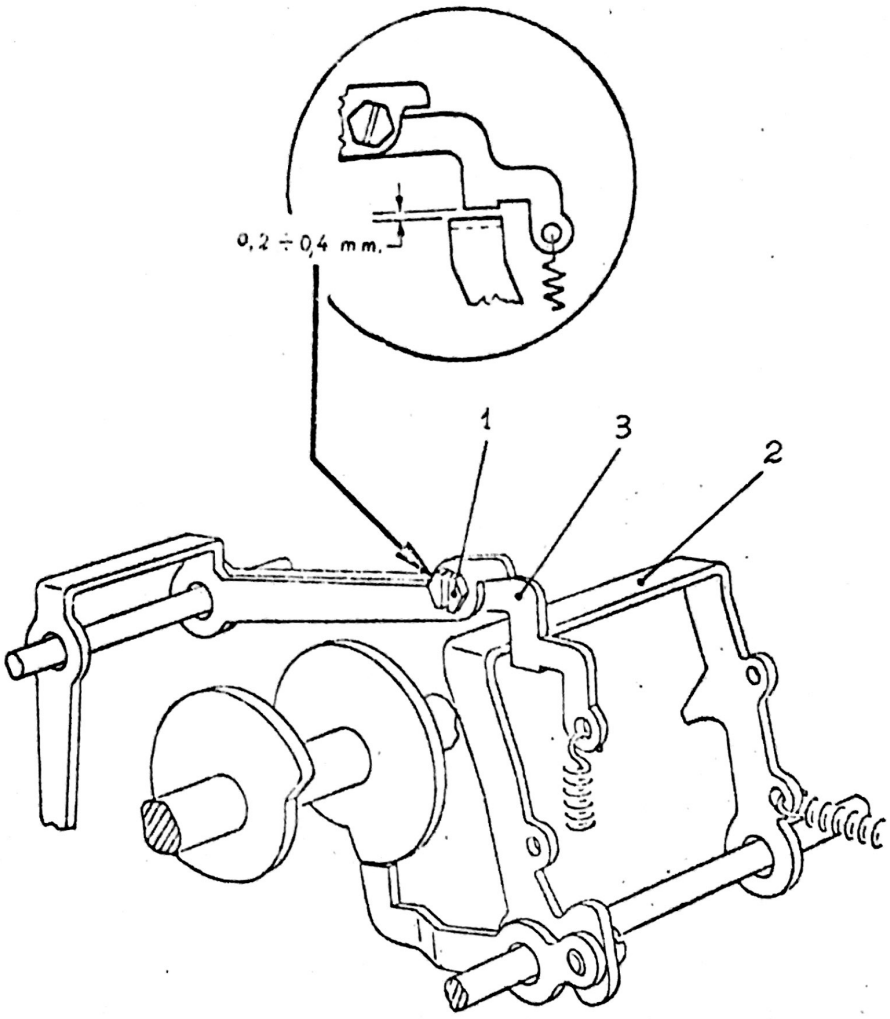
Tripping of the setting bail clutch

a) Disengage the keyboard locking and the setting bail clutches

b) Depress the SPACE key, rotate the powel shaft slightly and position bail 2 under arm 3 as shown in the detail of the figure.
In this condition modify the position of arm 3; there should be 0,2 to 0,4 mm (0,008 to 0,015 inch) clearance between the two named members, as shown in the detail.

c) Tighten screw 1

d) The same clearance should exist also when there it is depressed the lose shift exclusion key.


0,2 ÷ 0,4 mm.
1
3
2

Position of the vane group and of the travel limiting plate of the movable toothed rack

a) Tighten the locking screws of the vane group slightly friction tight

b) Disengage the clutch of the setting bail

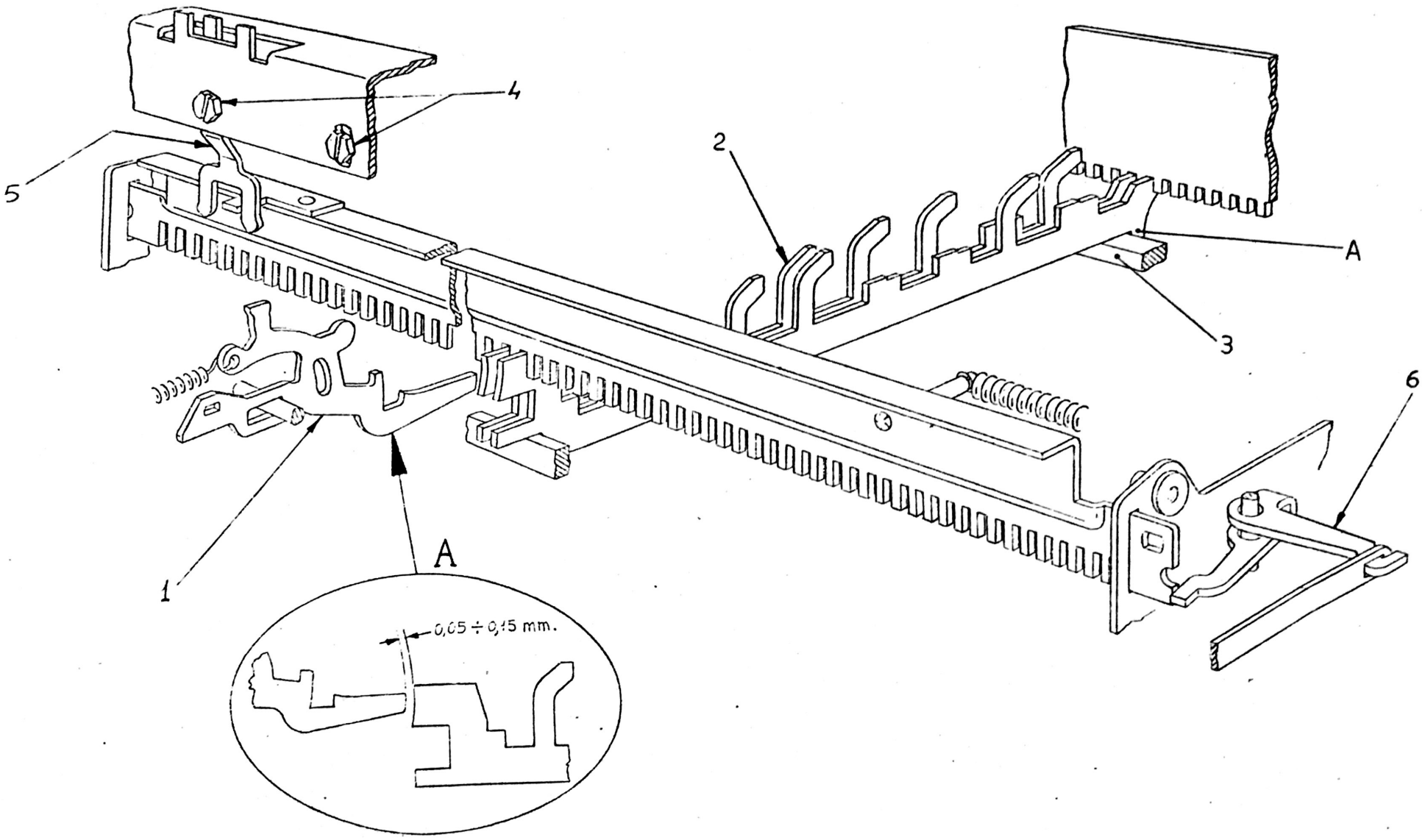
c) Position the vane group; there should be 0,05 to 0,15 mm (0,002 to 0,006 inch) clearance between the rightmost and leftmost setting levers 1 and the relative setting slides, when these latter are brought to their farthest fore position, namely when projection A of named setting slides contact rear transverse member 3, as best shown in the detail.

d) Tighten the locking screws of the vane group when the named condition is attained.

e) Set the case shift device into OUT condition and disengage the setting bail clutch.

f) Loosen screws 4 friction tight; duly position stop plate 5 so that the setting levers 1 are central to each relevant setting slide pair 2 when the toothed rack is deplaced in either farthest travel. The toothed rack may be suitably displaced by operating bell cranck 6.

g) Tighten screws 4 when the required conditions are attained.

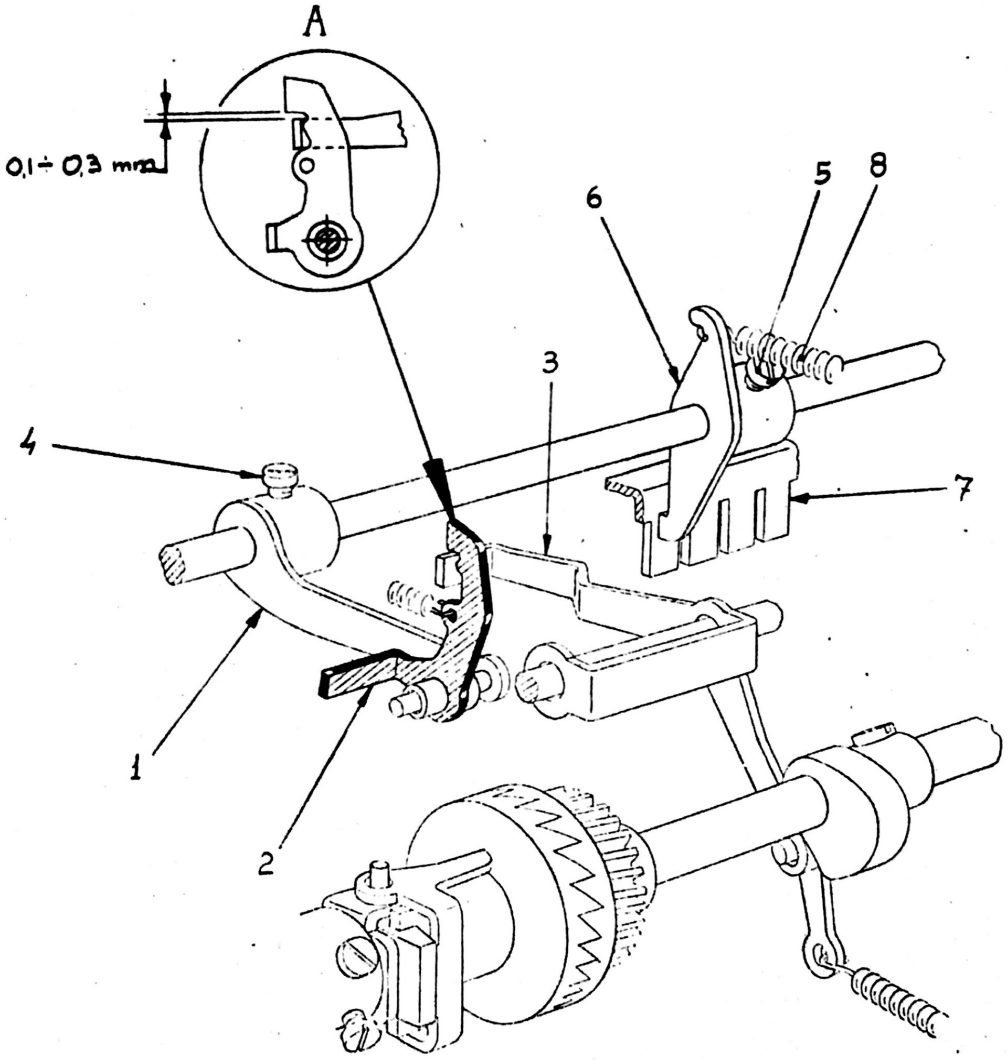

4
5
2
A
3
6
1
A
0,05 ÷ 0,15 mm.

Home position of the send tripping linkage

a) Position cranck lever 1 axially so that latching lever 2 is approx. central to the thickness of the lung of control bail 3.
Tighten screws 4.

b) With disengaged setting bail clutch, loosen screws 5 and position lever 6 axially so that its hub clears the intermediate flank of the machine frame by $\geqslant$ 0,5 mm ($\geqslant$ 0,02 inch); at the same time check that spring 8 is, as far as possible, in right angle relation.
Tighten screws 5 friction tight.

c) Hold the lower projection of lever 6 against toothed rack 7 and position cranck lever 1 angularly; there should be 0,1 to 0,3 mm (0,004 to 0,015 inch) clearance between latching lever 2 and the turned-over end portion of control bail 3, as indicated in the encircled detail.
Tighten screws 5.


A
0,1 ÷ 0,3 mm
1
2
3
4
5
6
7
8

Prevention of the send clutch engagement when two keys are simultaneously depressed

a) Loosen screws 1 friction tight

b) Disengage the setting bail and keyboard locking clutches

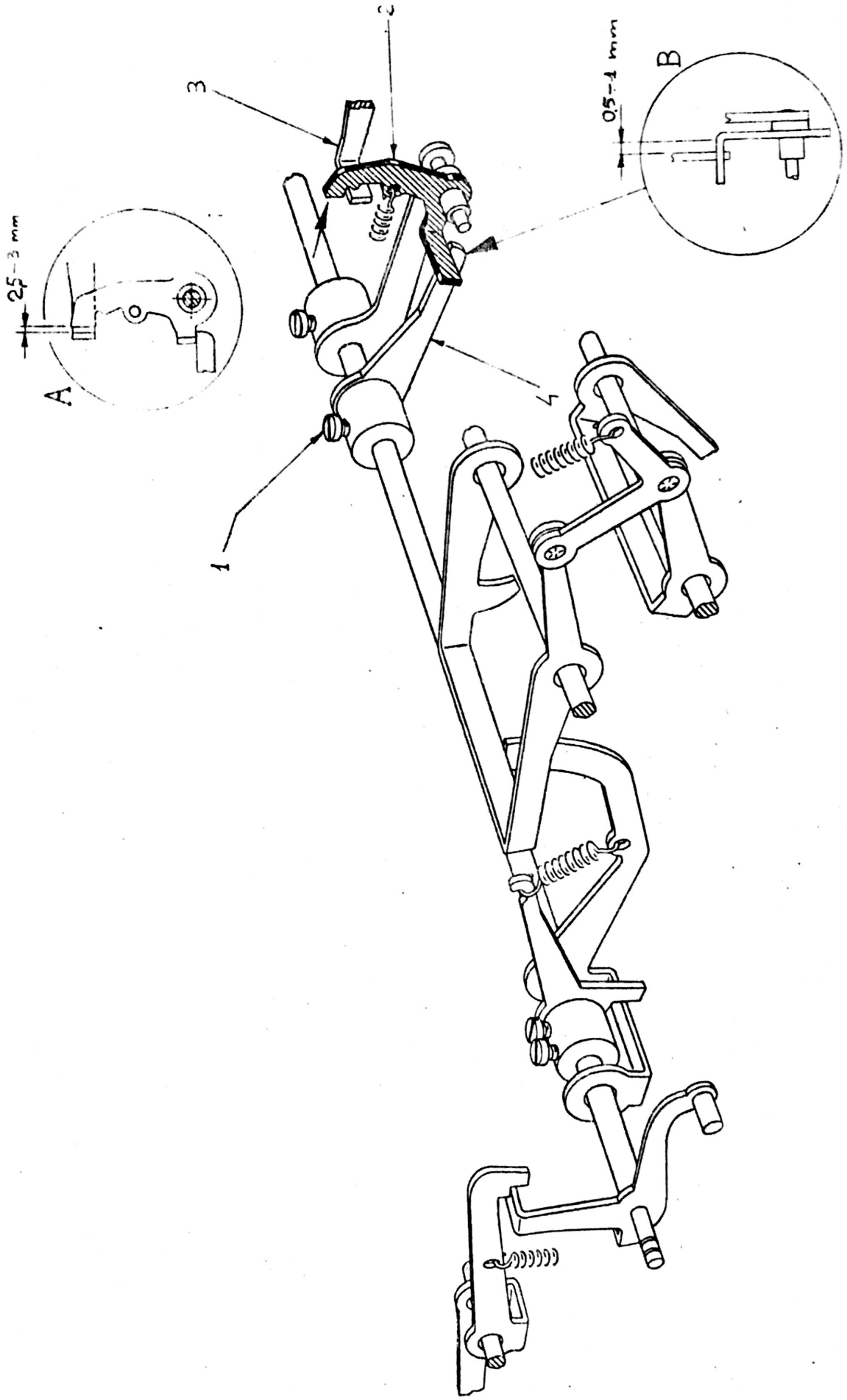
c) Depress any two keys simultaneoulsy. Push locking member 2 on the indicated point by means of a tool, so as to rock it slightly rearwards

d) In this condition rotated the power shaft till the lug of bail 3 is in front of latching lever 2, as shown in the detail A. Release latching lever 2.

e) Position crank lever 4:

axially - it should clear latching lever 2 by 0,5 to 1 mm (0,02 to 0,04 inch) as shown in detail B.

angularly - it should rock latching lever 2 so as to establish 2,5 to 3 mms (0,098 to 0,12 inch) clearance between the turned-over end portion of the bail and the latching lever it self, as indicated in detail A. Tighten screws 1.

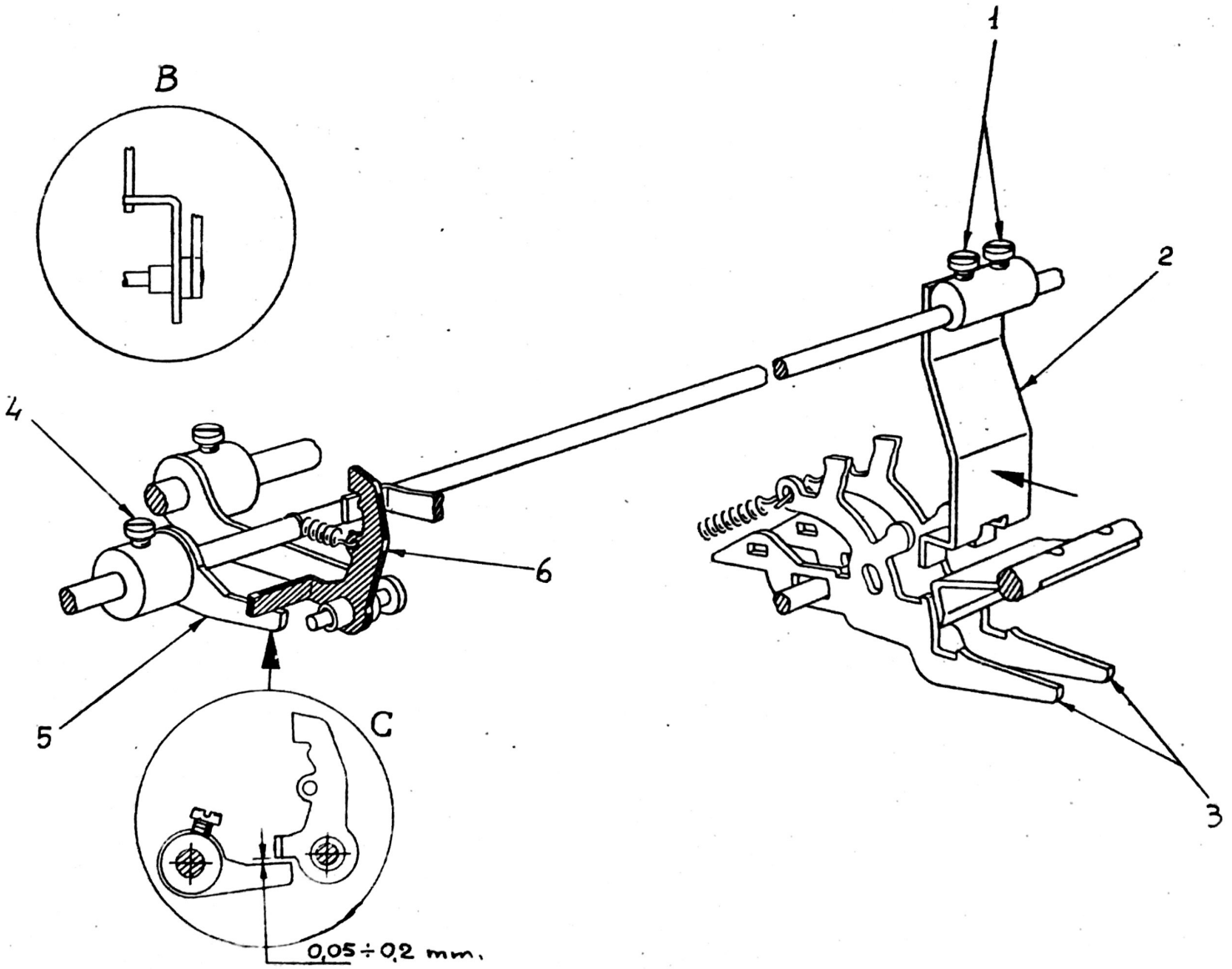

2
3
0,5-1 mm
B
2,5-3 mm
A
4
1

Prevention of the send clutch engagement due to the IN and OUT operation of the case shift device

a) Loosen screws 1. Position plate 2 axially so that is engages the setting levers 3 connected to the case shift IN and OUT controlling mechanism. At the same time check that a minimal clearance exists between the threated blocks mounte on the machine frame and named plate 2. Tighten screws 1.

b) Loosen screws 4 position crank lever 5 axially; named crank lever 5 should engage the lug of latching lever 6 by an amount which equals the thickness of the crank lever itself. Tighten screws 4 friction tight when named condition is attained.

c) With disengaged setting bail, rock plate 2 in the direction shown in figure so as to bring it into contact with setting levers 3.
In named condition modify the angular position of crank lever 5 which should clear the lug of locking lever 5 by 0,05 to 0,2 mm (0,002 to 0,008 inch), as shown in detail C. Tighten screws 4.


B
1
2
4
6
5
C
3
0,05 ÷ 0,2 mm.

Tripping of the IN-Linkage of the case shift device

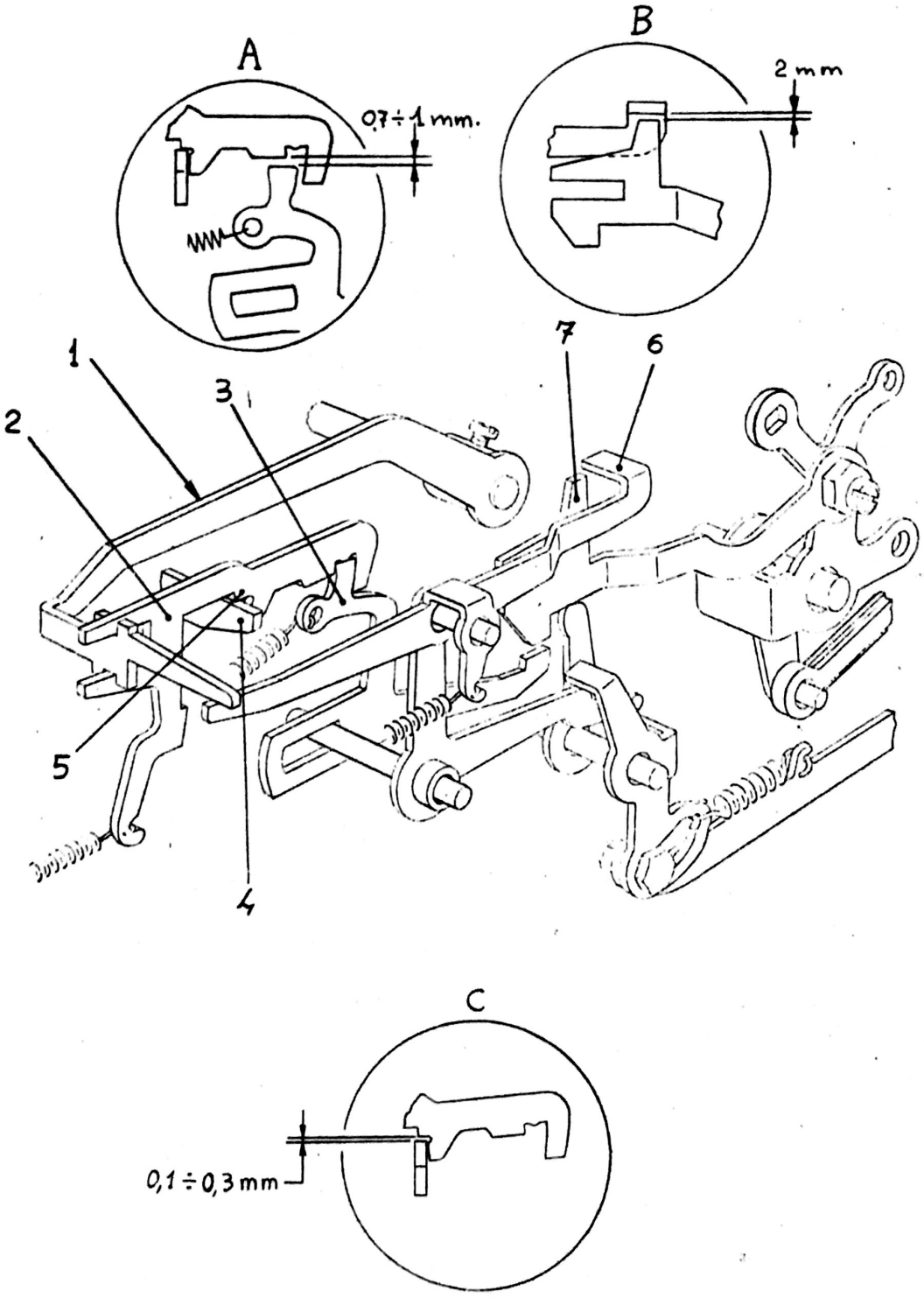
a) Loosen the screws of crank lever 1 slightly friction tight

b) Position the case shift device into OUT condition

c) Disengage the setting bail and the locking bail

d) When this condition is attained position crank lever 1:
axially - trip lever 2 should be in right angle relation with its guide toothed rack; and
angularly - it should rock trip lever 2; there should be 0,1 to 0,3 mm (0,004 to 0,012 inch) clearance between shoulder 5 of lever 2 and support lug 4, as shown in detail C. Tighten the screws of crank lever 1.

Verify: depress the case shift locking key and ascertain that there should be 0,7 to 1 mm (0,027 to 0,04 inch) clearance between trip lever 2 and lever 3, as indicated in detail A.
When all these conditions are duly attained furthermore make sure that there should be $\geqslant$ 1 mm ($\geqslant$ 0,04 inch) clearance between the rear lug of swing lever 6 and the tooth of connecting link 7, as shown in detail B.


A
0,7 ÷ 1 mm.
B
2 mm
1
2
3
4
5
6
7
C
0,1 ÷ 0,3 mm

Eccentric screw of the case shift device control connecting link

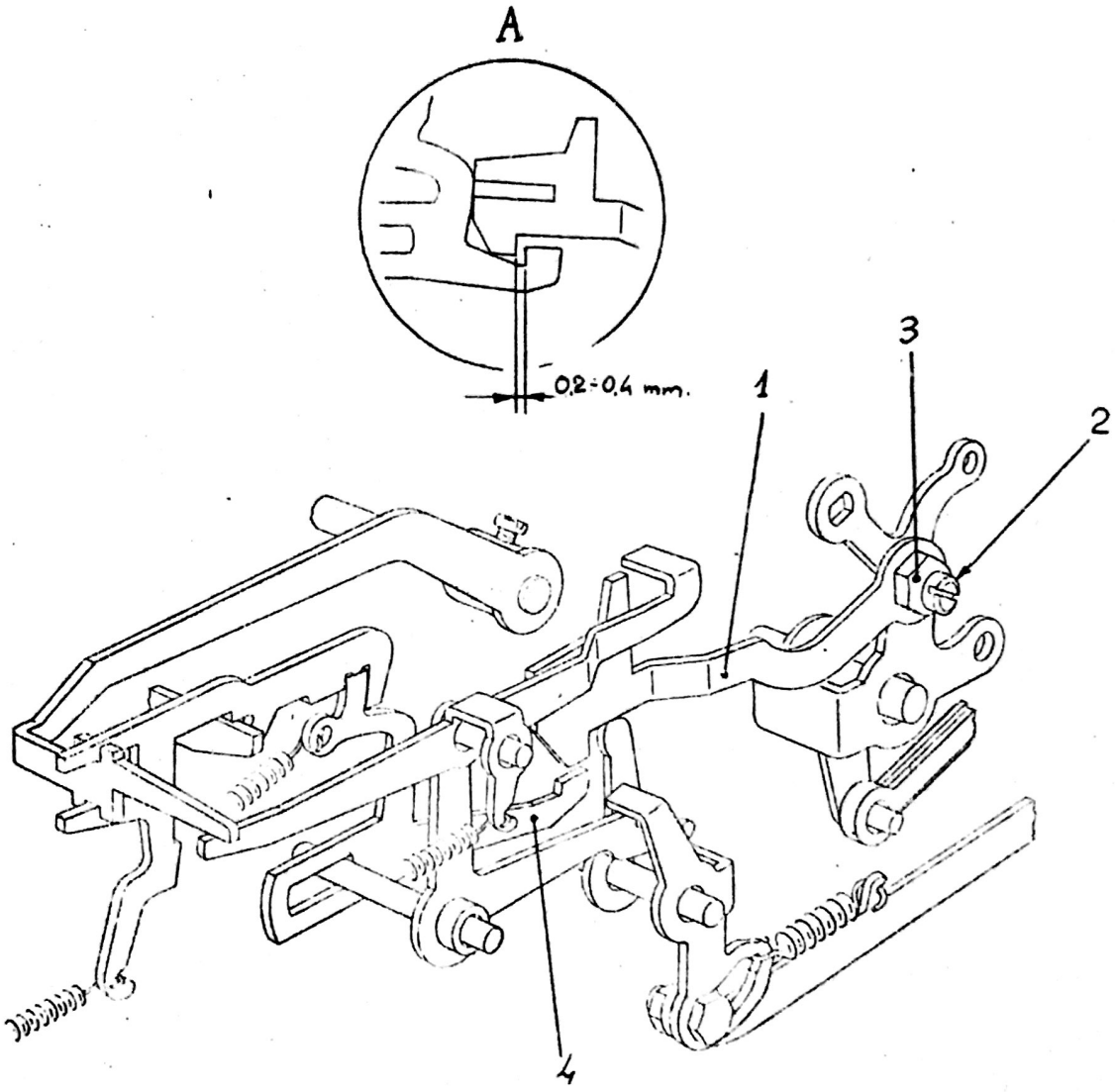
a) Disengage the setting bail and the locking clutches

b) Depress the case shift locking key

c) Rotate the power shaft slowly and stop it when connecting link 1 is at its farthest fore travel position.

d) In this condition loosen screw 2 slightly friction tight and suitably adjust eccentric screw 3; there should be 0,2 to 0,4 mm (0,008 to 0,015 inch) clearance between the shoulder of connecting link 1 and the shoulder of lever 4, as shown in the encircled drawing.

e) Tighten screws 2.


A
0.2-0.4 mm.
1
2
3
4

Eccentric screw of the yieldable member of the case shift device

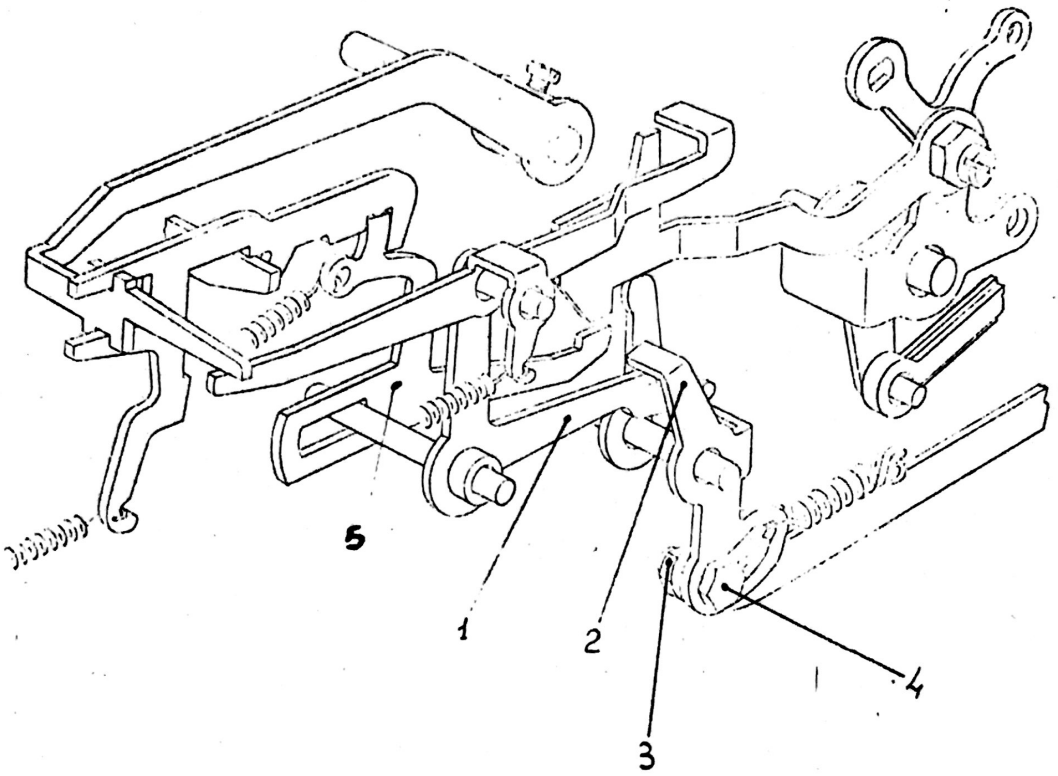
a) Disengage the setting bail and the keyboard locking clutches

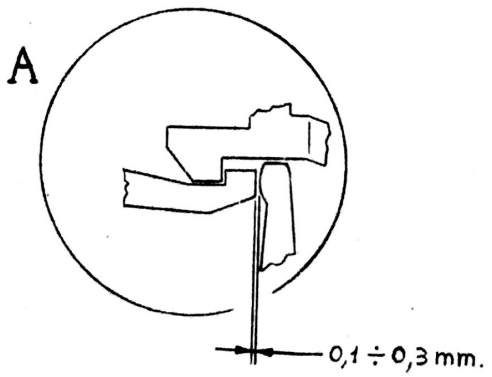
b) Depress the case shift device locking key

c) Rotate the power shaft slowly till lever 5 snaps counterclockwise

d) Loosen nut 3 friction tight when this condition is attained ad suitably adjust eccentric screw 4; there should be 0,1 to 0,3 mm (0,004 to 0,012 inch) clearance between lever 5 and the arm of bail 2, as shown in the encircled drawing.

e) Tighten nut 3.


5
1
2
3
4

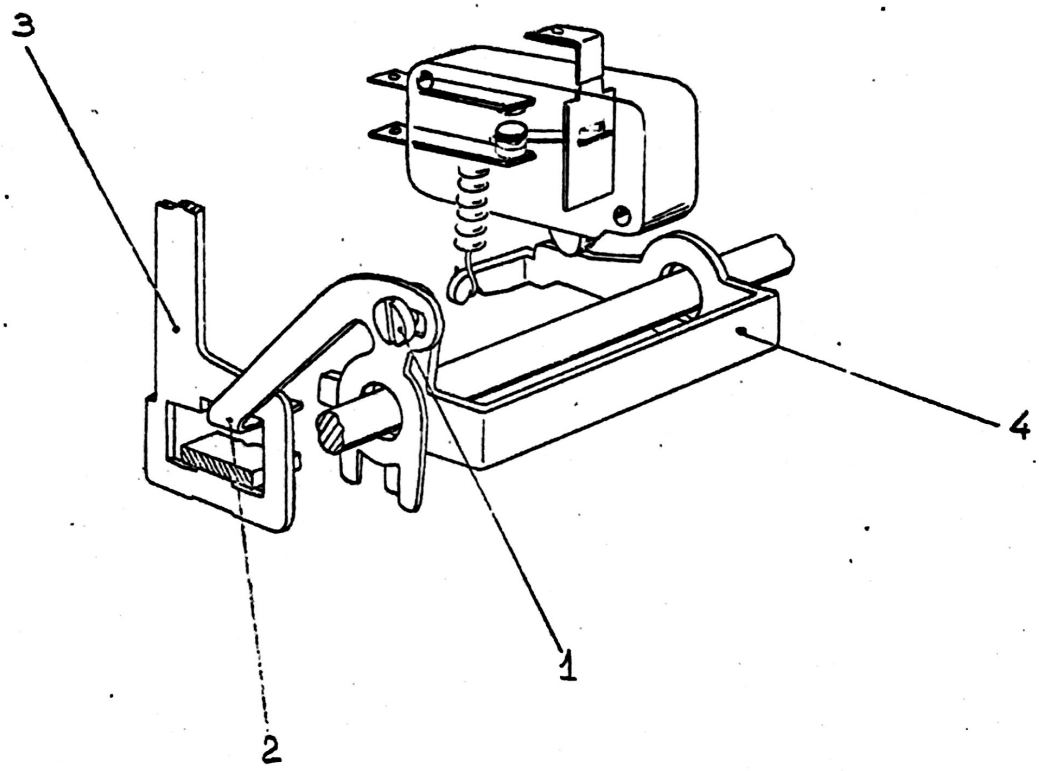

A
0,1 ÷ 0,3 mm.

Controlling bail of the starting switch

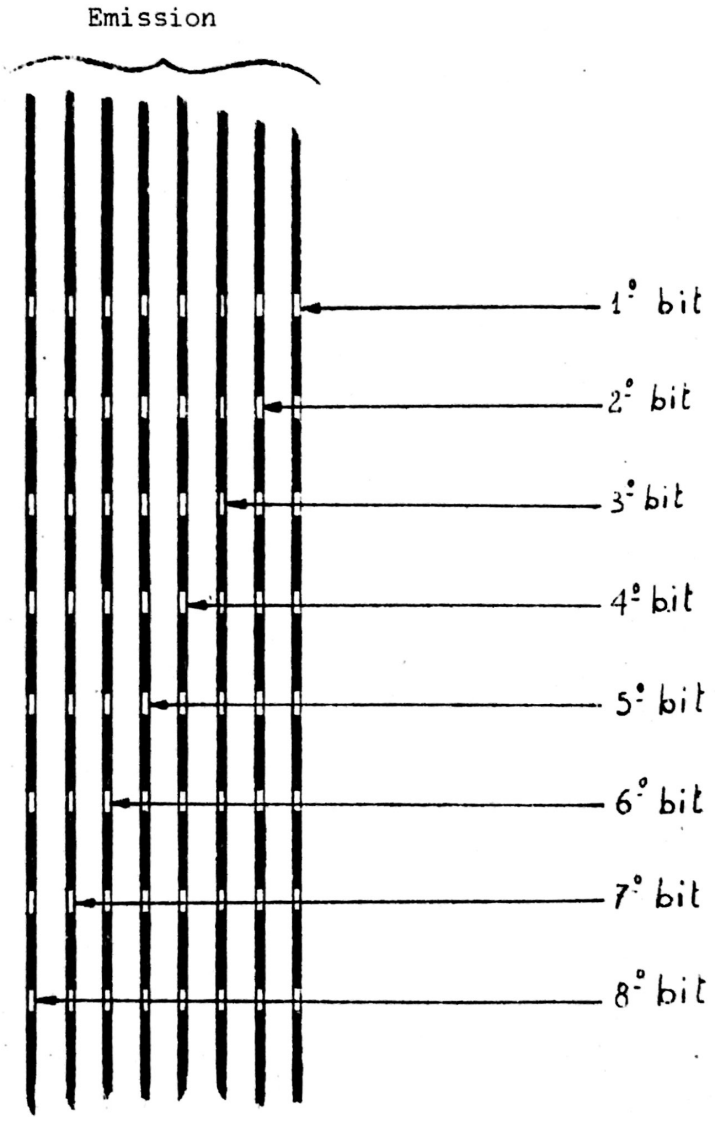
a) Loosen screw 1 friction tight

b) With DELETE key not depressed, hold arm 2 in contact with stem 3 of the named key, as shown in figure.

c) In this condition adjust bail 4 angularly so that it may control the opening of the microswitch by means of a 0,5 mm (0,02 inch) safety over travel. Tighten screw 1.


3
4
1
2

Connection patters of the code transferring rods with the send bars

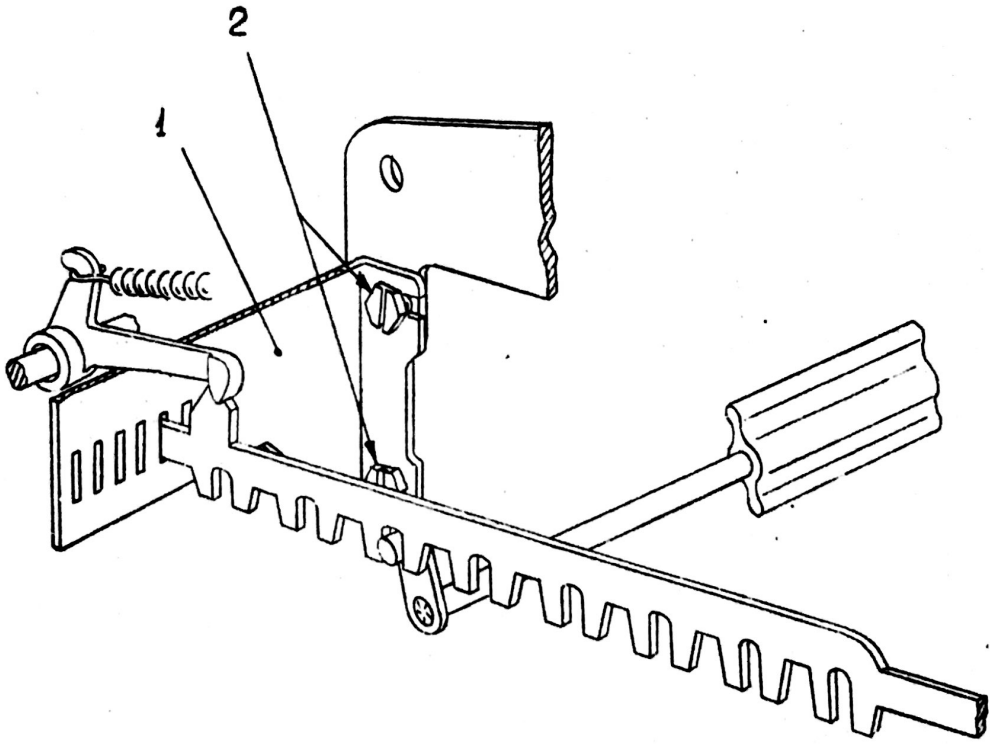

Emission
1° bit
2° bit
3° bit
4° bit
5° bit
6° bit
7° bit
8° bit

Position of the slotted guide plate of the send bars

a) Position slotted guide plate 1:

longitudinally - screws 2 should be at the slot end position

vertically - the play of the slots over the screws should be taken up upwards


2
1

Tripping of the send clutch

a) Loosen screws 1;

b) Disengage the clutches of the setting bails and of the send unit;

c) Depress any key except the case shift ones; then rotate the power shaft and stop it when bail 2 rides the peak of the cam;

d) When this condition is attained, suitably position crank lever 1:
axially - so as to bring connecting link 4 to be positioned in right angle direction; and
angularly - trip arm 5 should be rocked so as to trip the send clutch by developing a gap of 0,4 to 0,6 mm (0,015 to 0,025 inch), as clearly shown in the encircled drawing.

e) Tighten screws 1.

2
3
1
4
A
5

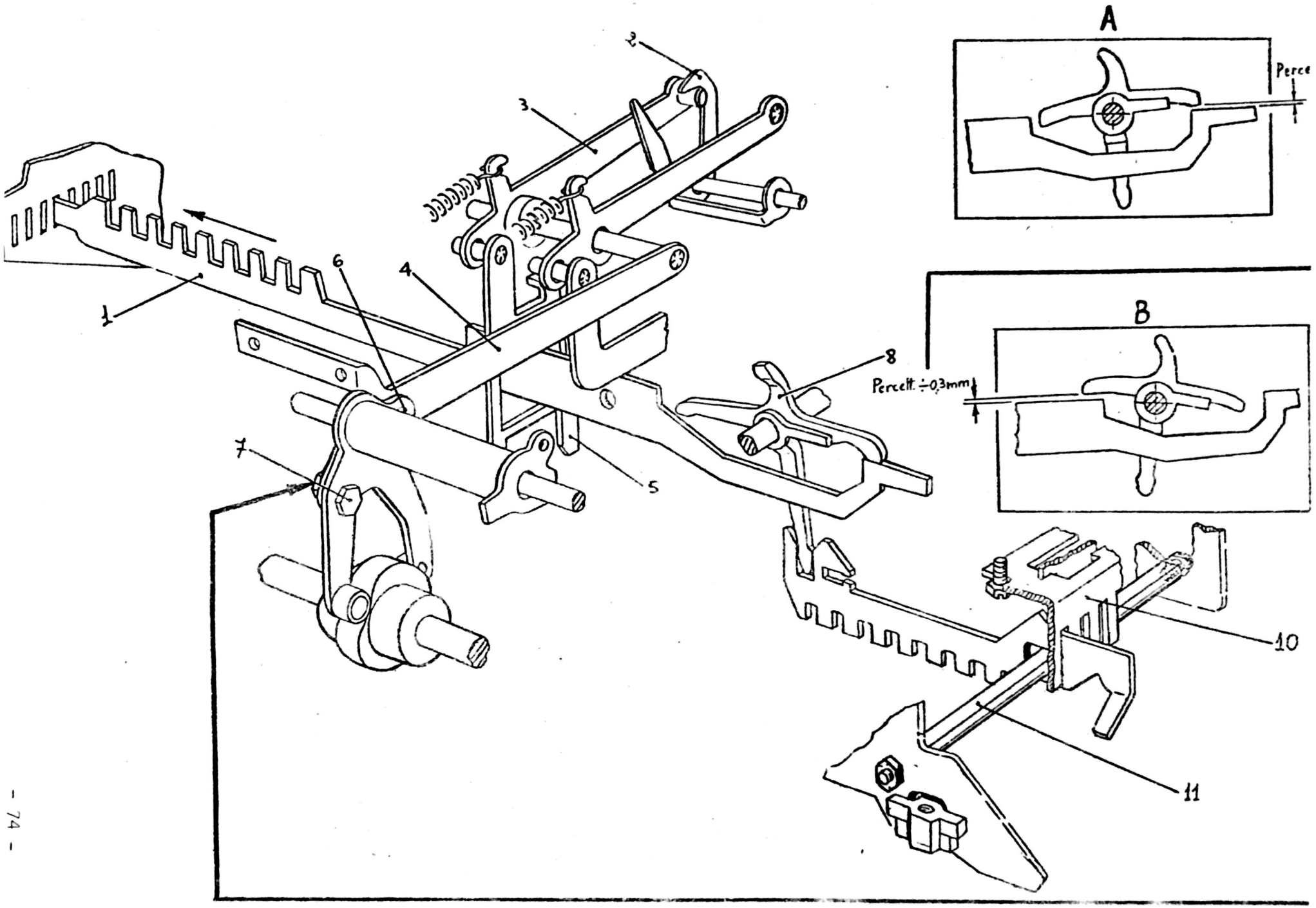
Transferring operation control and position of the slide stop spindle

a) Loosen the screws of the toothed rack guiding send control slides 10; then loosen the screw and the nut of slide stop spindle 11.

b) Set up a code "U" or "✱" on the keyboard

c) Rock lever 4 to its farthest transferring control position. In these conditions turn eccentric screw 7 and set bail 5 to its farthest transferring control travel. Now tighten the screw and the nut of slide stop spindle 11; carry out these two operations simultaneously in order to maintain the spindle in parallel relation to the machine axis.

d) Revise the position of eccentric screw 7; there should be a minimal but a maximum of 0,3 mm (0,012 inch) clearance between bars 1 and cross-like levers 8 as defined in details A and B.
Tighten the nut of eccentric screw 7 and of screw 6.

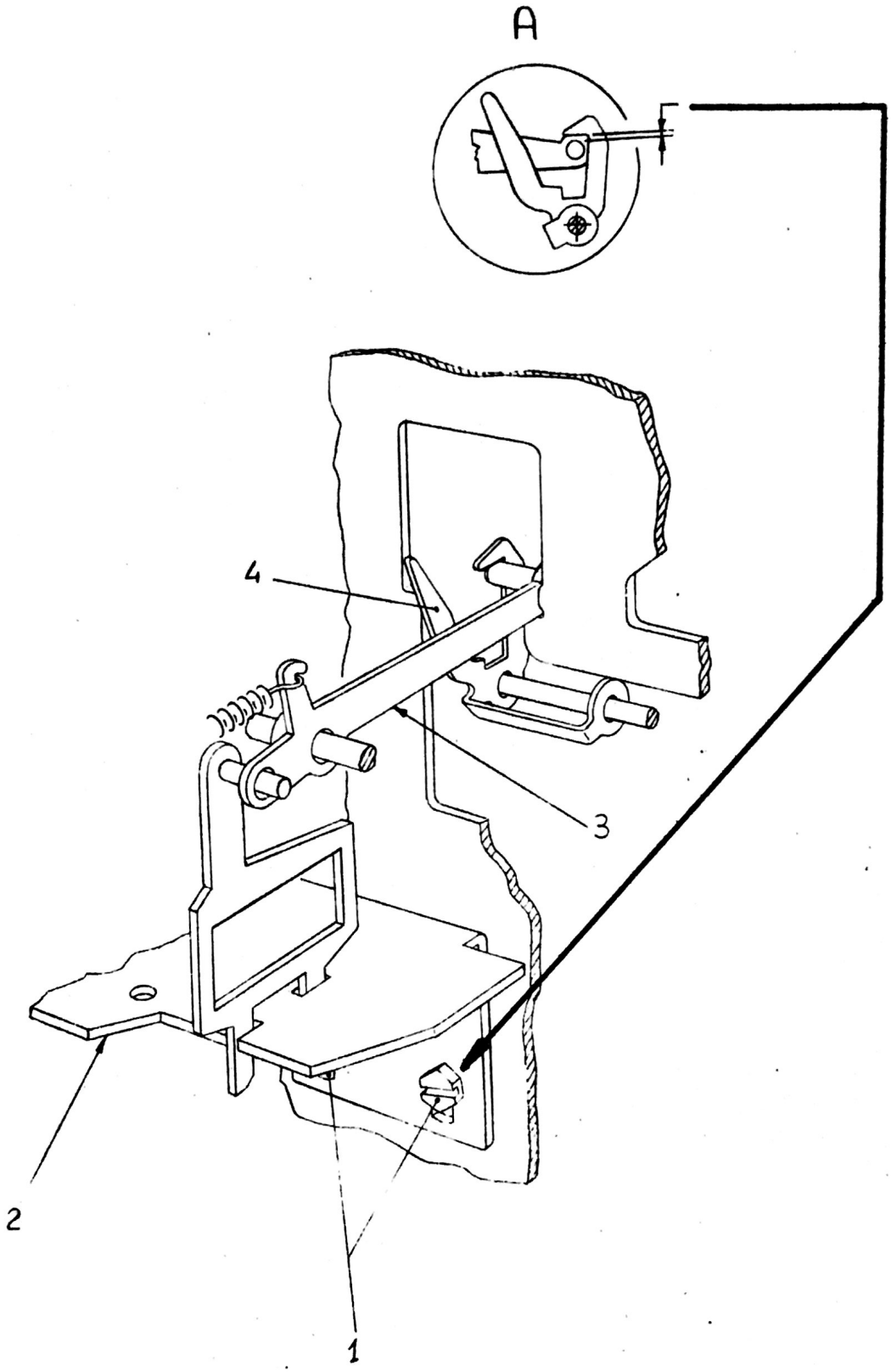

A
Perce
B
Percett. ÷0,3mm
1
2
3
4
5
6
7
8
10
11

Rest position of the transferring bail

a) Disengage the send clutch; ascertain that the check pawl dwells on the low portion of the cam

b) Loosen screws 1 friction tight; guide plate 2 should be vertically adjusted so as to provide 0,1 to 0,3 mm (0,004 to 0,012 inch) clearance between the pin rivetted on swing lever 3 and selection latch 4, as shown in the encircled drawing A.

Tighten screws 1.


A
F
4
3
2
1

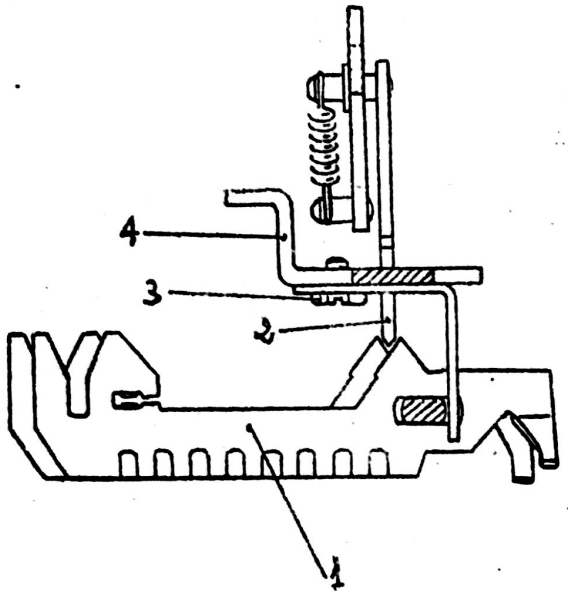
Centering of the locking knife edge over the send control slides

a) Set up a code "U" on the send bars.

b) Rotate the main shaft and displace locking knife edge 2 to its farthest lower position.

c) Tighten screws 3; take care not to modify the position of guide 4 which has been defined by the self-centering action of locking knife edge 2 between the teeth of the send control slides.

d) Verify: set up the codes "U" and "✱" alternately on the send bars and then bring locking knife 2 to its farthest lower travel position. In this condition check the position of slides 1 with respect to locking knife 2; namely check that the locking action of the knife edge on the slides is equal in either direction thereof.

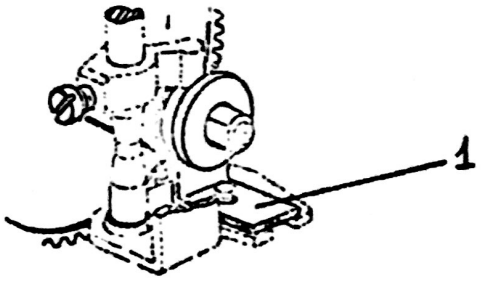

4
3
2
1

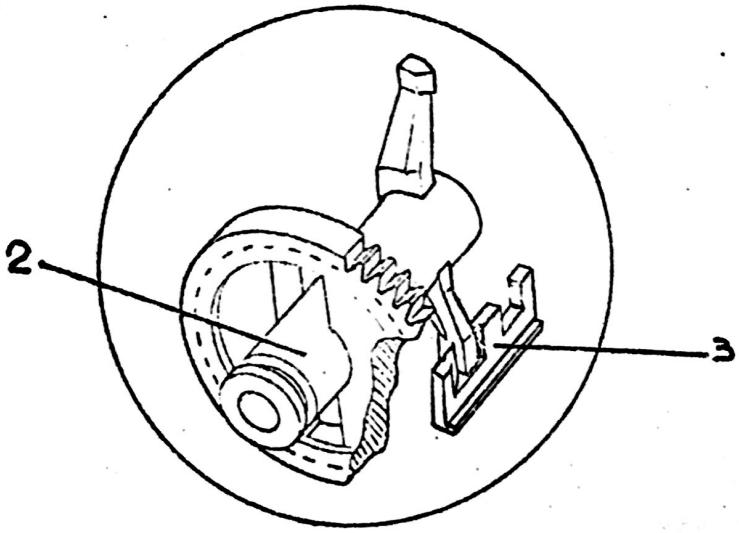
Position of the adjusting plate of the parallel-to-serial converting wheel

a) Set up a "U" or "✱" code combination on the send bars

b) Trip the send clutch and set the reading arm of the parallel-to-serial converting wheel in correspondence to the edge of tapered setting plates 3, as shown in the detail of the figure.

c) Fix adjusting plate 1; the residual axial play admitted for parallel-to-serial converting wheel should be of the same amount in either mark and space positions. Named play is defined by the edge of tapered setting plates 3, when displaced in either directions, and adjusting plate 1.


1


2
3

Centering of the T-shaped setting lever to the send contact lever

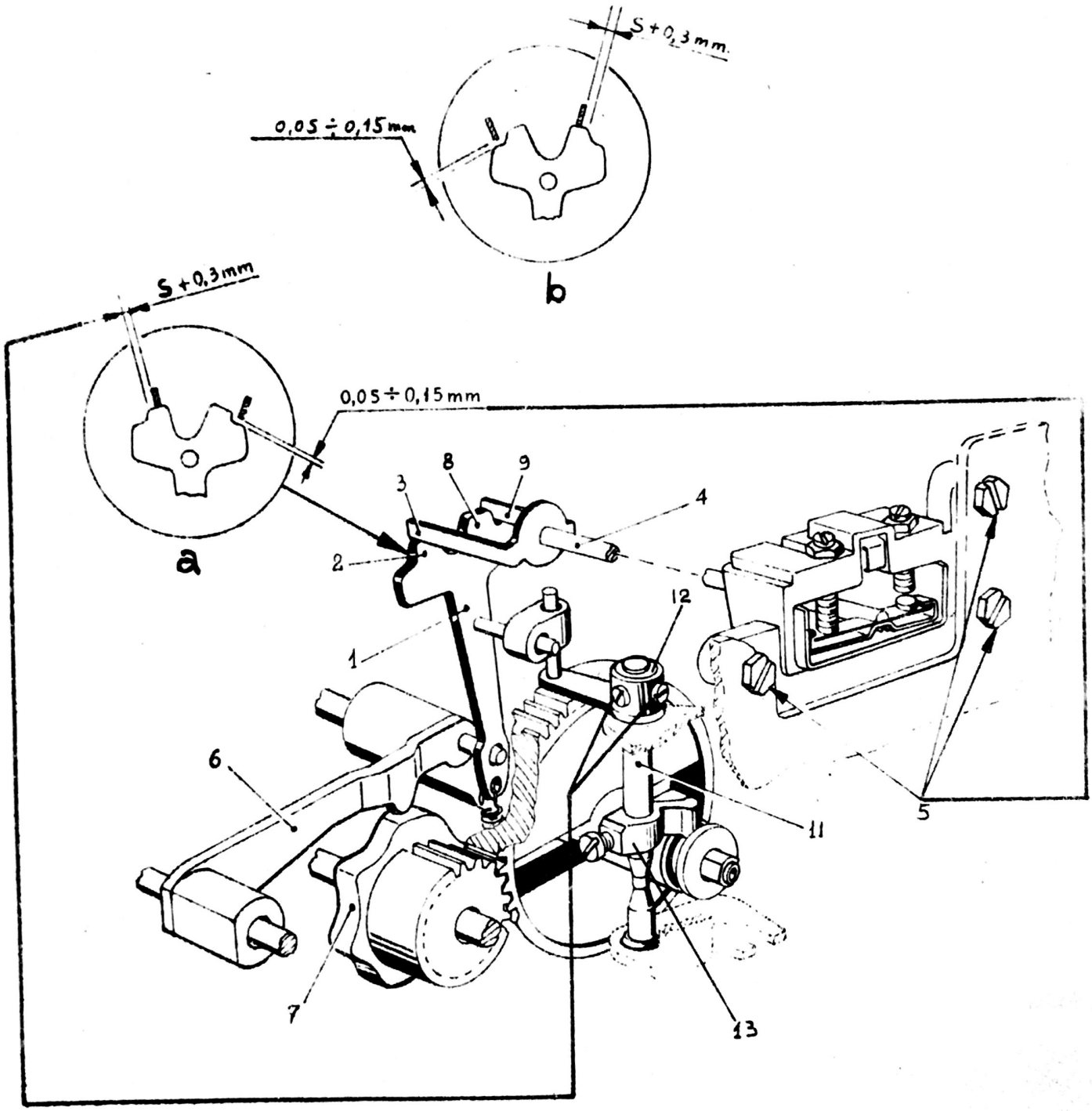
a) Disengage the send clutch

b) Tighten the screws of crank lever 12 slightly friction tight; taking care that the crank lever should duly contact the shoulder stop element on shaft 11.

c) Position crank lever 13; with the play of shaft taken up downwards, there should be 0,1 mm (0,004 inch) clearance between crank lever 13 and the groove bottom of the parallel-to-serial converting wheel hub. Tighten the screw of crank lever 13.

d) Set up a code "delete". Engage the send clutch and rotate the power shaft slowly; bring cam-follower 6 on the START peak of cam 7, which is the first one after the larger peak corresponding to the STOP. Without modifying the position taken up by the parallel-to-serial converting wheel, rock T-shaped setting lever 1 so that lug 3 of send control lever 4 engages heel 2 by an amount which equals the lug thickness plus 0,3 mm (0,012 inch), as shown in detail A.

e) Continue the slow rotation of the power shaft and bring cam-follower 6 on the next peak of multi-lobe cam 7.
In this condition check the engagement existing between heel 8 and lug 9 so as shown in detail B, which should be of the same amount as previously explained, namely it should equal the lug thickness plus 0,3 mm (0,012 inch).


S +0,3 mm
0,05 ÷ 0,15 mm
b
S +0,3 mm
0,05 ÷ 0,15 mm
a
1
2
3
4
5
6
7
8
9
11
12
13

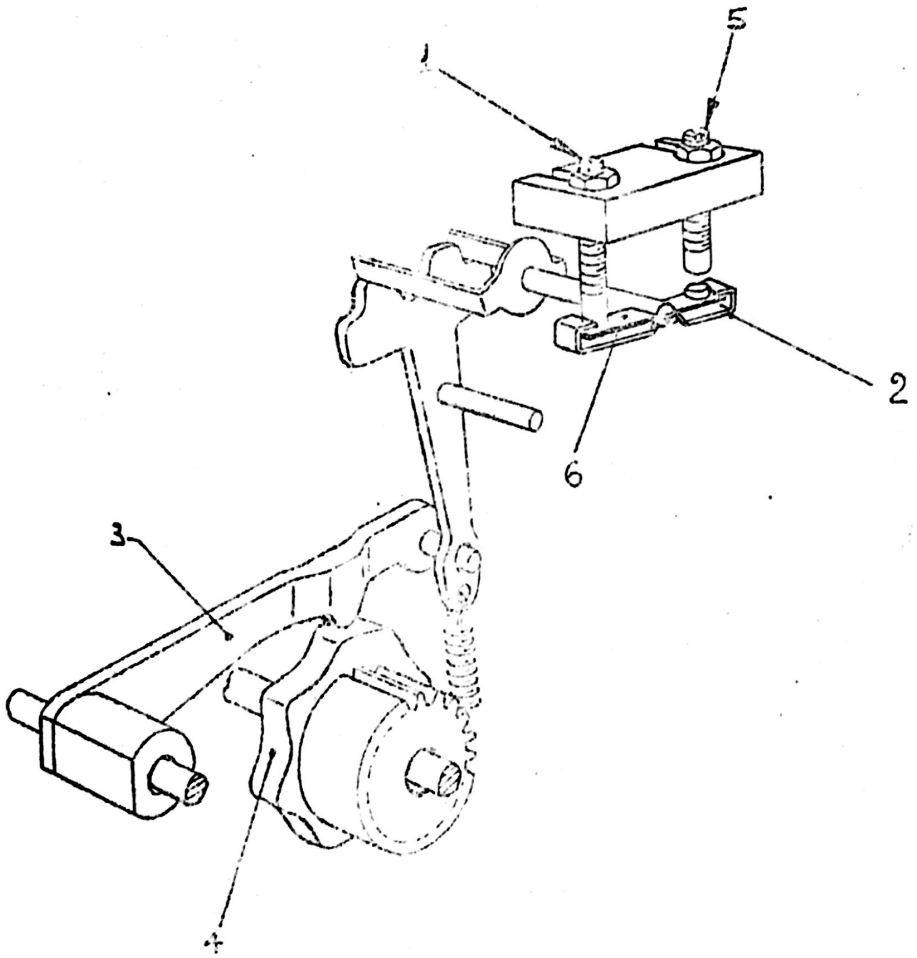
Send contacts

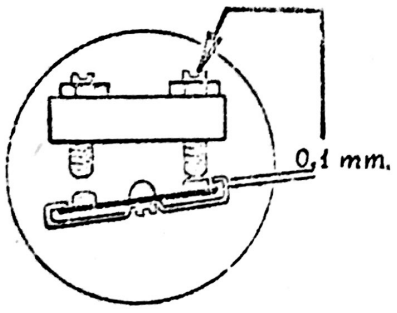
a) Disengage the send clutch

b) In this condition contact screw 5 should be adjusted so as to provide 0,1 mm (0,004 inch) clearance between the bent leaf spring of swinger 6 and swinger support 2 (detail A).

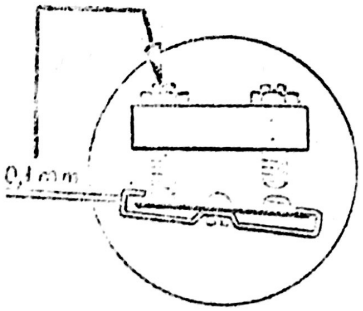
c) Set up the code combination "NULL" on the storing device output slides. Engage the send clutch and rotate the power shaft very slowly; bring cam-follower 3 on a peak of multi-lobe cam 4.

d) Turn contact screw 1 and establish a clearance of 0,1 mm (0,004 inch) between the bent leaf spring of swinger 6 and swinger support 2 (see detail B).
Verify the two positions; there should be 0,3 mm (0,012 inch) clearance between the open contact of swinger 6 and the contact screw (see detail C).

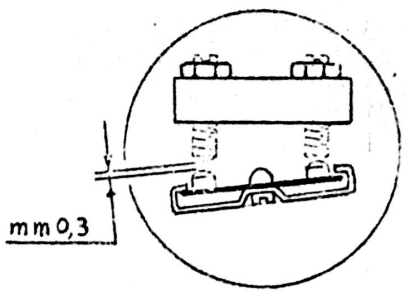




a



b



c

Position of the Answer Back drum supports

a) Assemble the Answer Back drum and loosen screws 1 and 2 of the Answer Back drum supports slightly friction tight.

b) Rotate the power shaft and position the two-color printing device into "reception" condition.

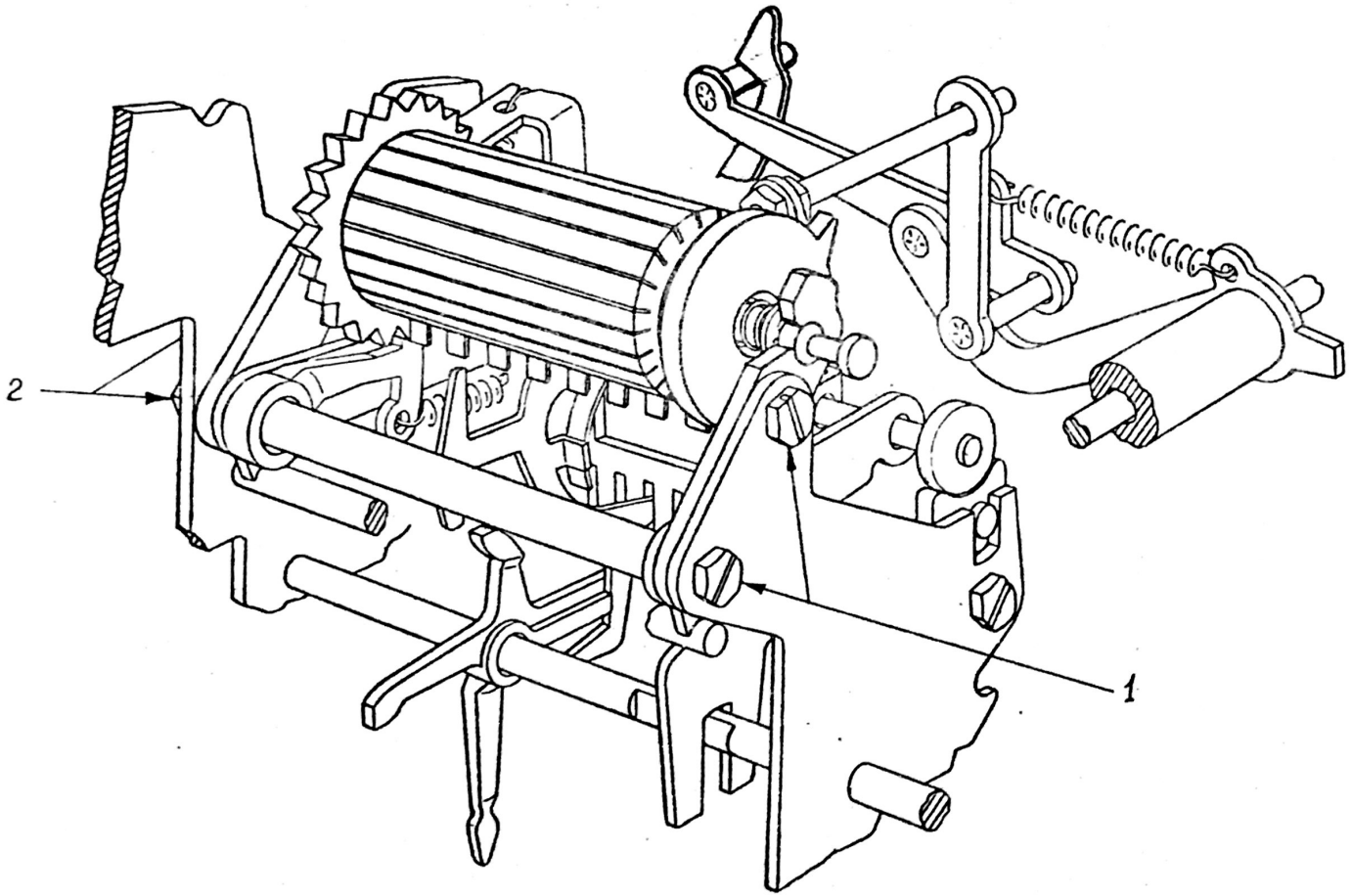
c) Trip the Answer Back device and set "NULL" code combination ward in front of the sensing levers. Resume the power shaft rotation and position the group to its farthest transferring travel position.

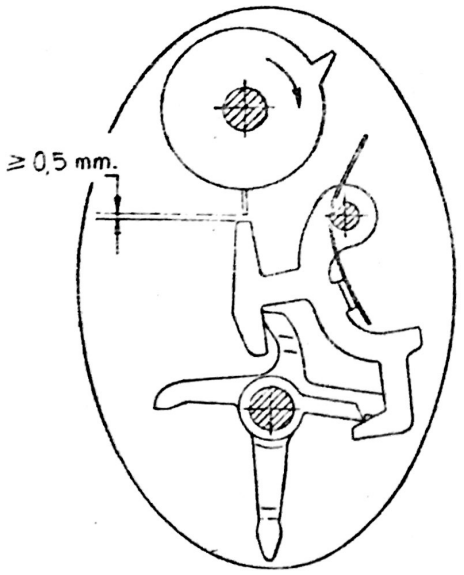
d) In this condition the two Answer Back drum supports should be positioned so as to provide a residual play of 0,3 to 0,5 mm (0,012 to 0,02 inch) on the send control slides.
Tighten screws 1 and 2.

Verify : Set the Answer Back device into rest condition and check:

1) there should be $\geqslant$0,05 mm ($\geqslant$0,02 inch) clearance between the edge of the code wards and the tip of the sensing levers.

2) observe that the Answer Back drum is still in right angle relation to the ideal axis of the machine.





A

Answer Back device tripping by "ENQ" and HERE IS functions

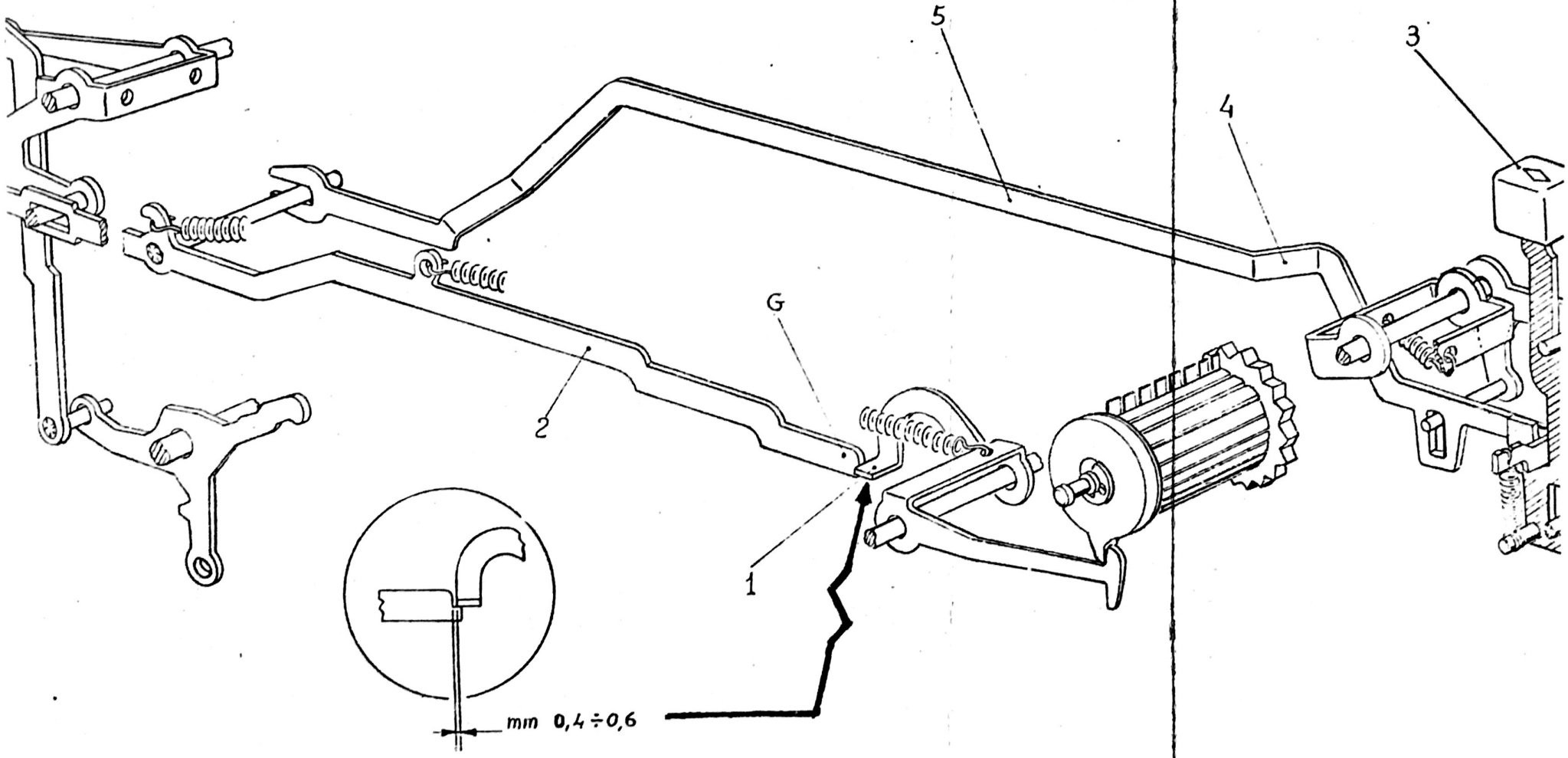
a) Set the two-cclor printing device into "reception" position; set the printer into rest position.

b) Set up the "ENQ" code combination on the printing bars.

c) Engage the function unit clutch, rotate the power shaft and stop it when the goniometer reads 280°.

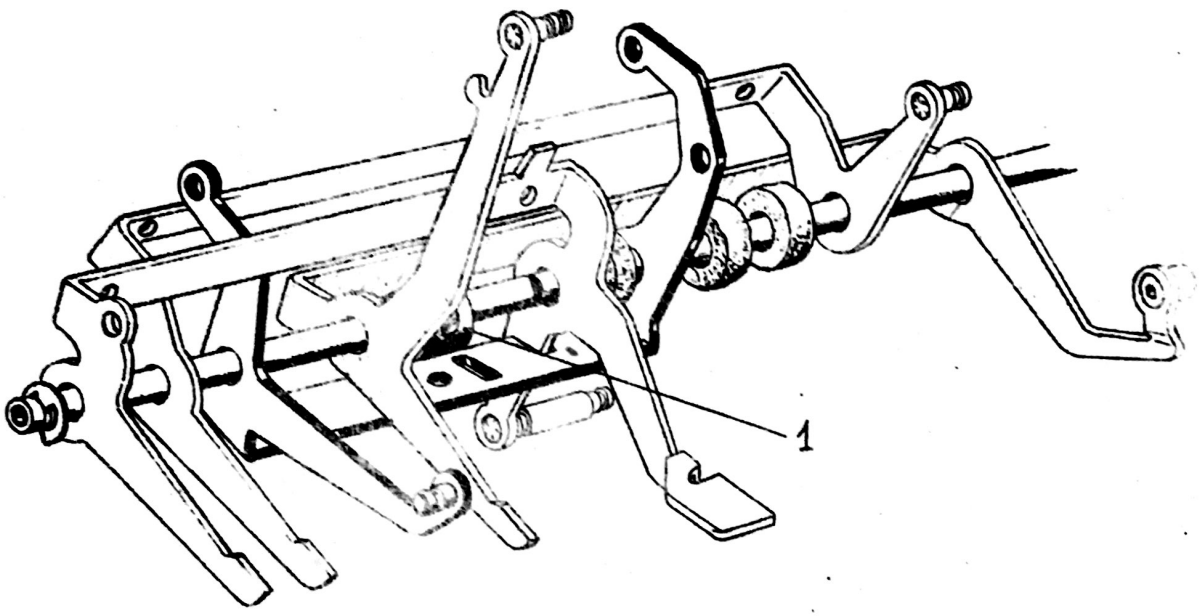
d) In this condition there should be 0,2 to 0,4 mm (0,008 to 0,015 inch) clearance between turned-over end portion 1 and the step G of connecting link 2, as shown in the detail. Adjust by suitably bending the turned-over end portion 1.

e) Restore the machine. Set the two-color printing device to "reception" position. Now depress the HERE IS key, namely key 3 shown in figure, and hold it depressed; there should be $\geqslant$0,2 mm ($\geqslant$ 0,008 inch) clearance between turned-over end portion 1 and the step G of connecting link 2. To adjust, suitably bend the already bent portion 4 of connecting link 5


5
3
4
G
2
1
mm 0,4 ÷ 0,6

Shoulder collar of the function bails

Position shoulder collar 1 so as to allow the function bails a play of 0,05 to 0,15 mm (0,002 to 0,006 inch). Tighten the screws of shoulder collar 1.


1