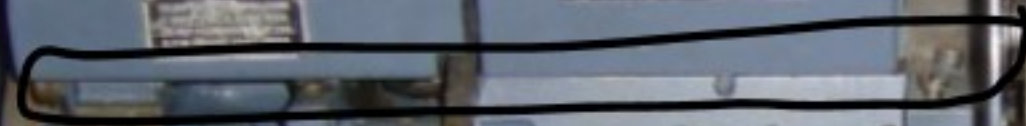


Fig. 83.

Automatic Screw
Machines 1860s



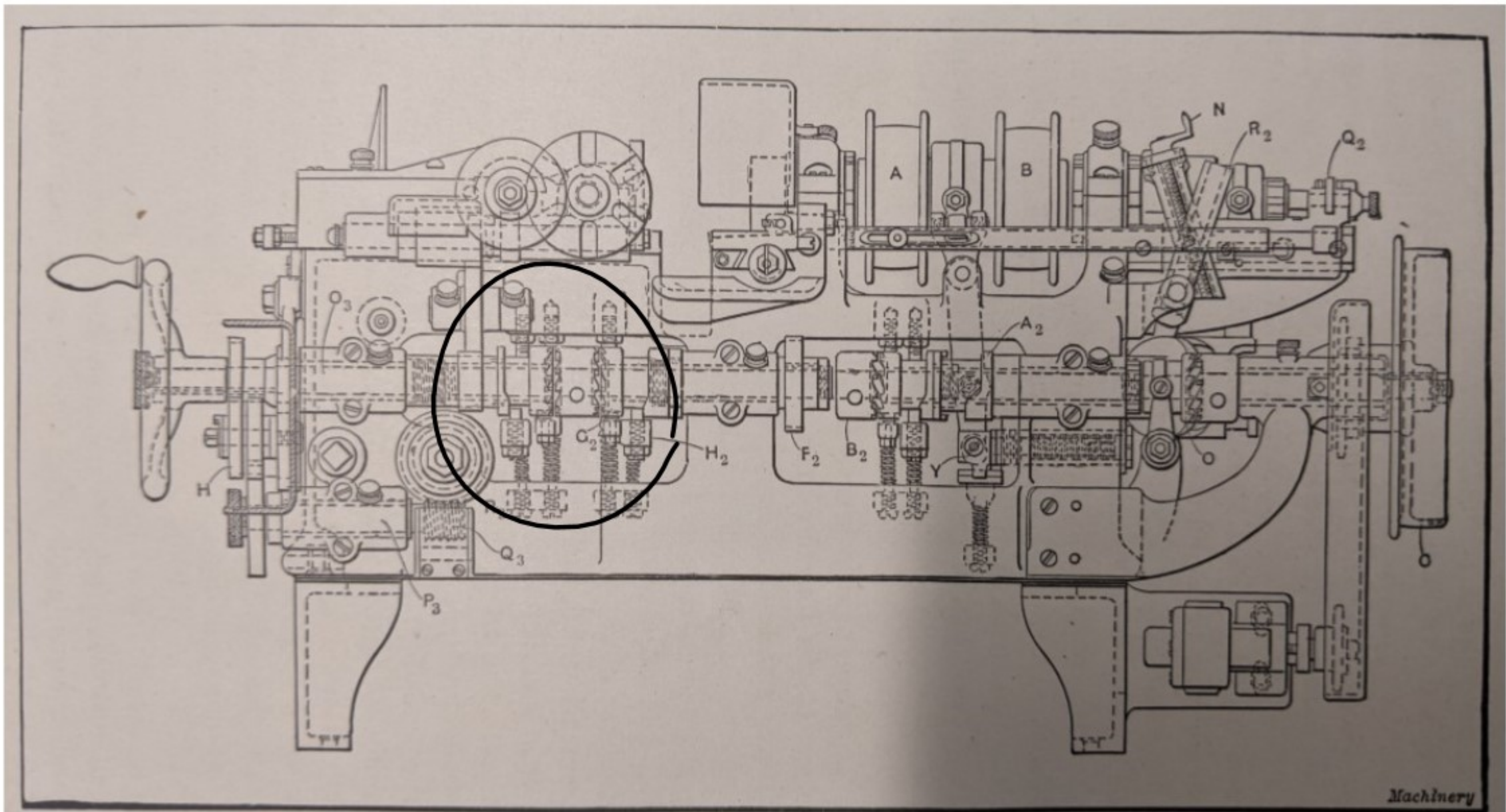


Fig. 2. Rear Elevation of the No. 00 Brown & Sharpe Automatic Screw Machine

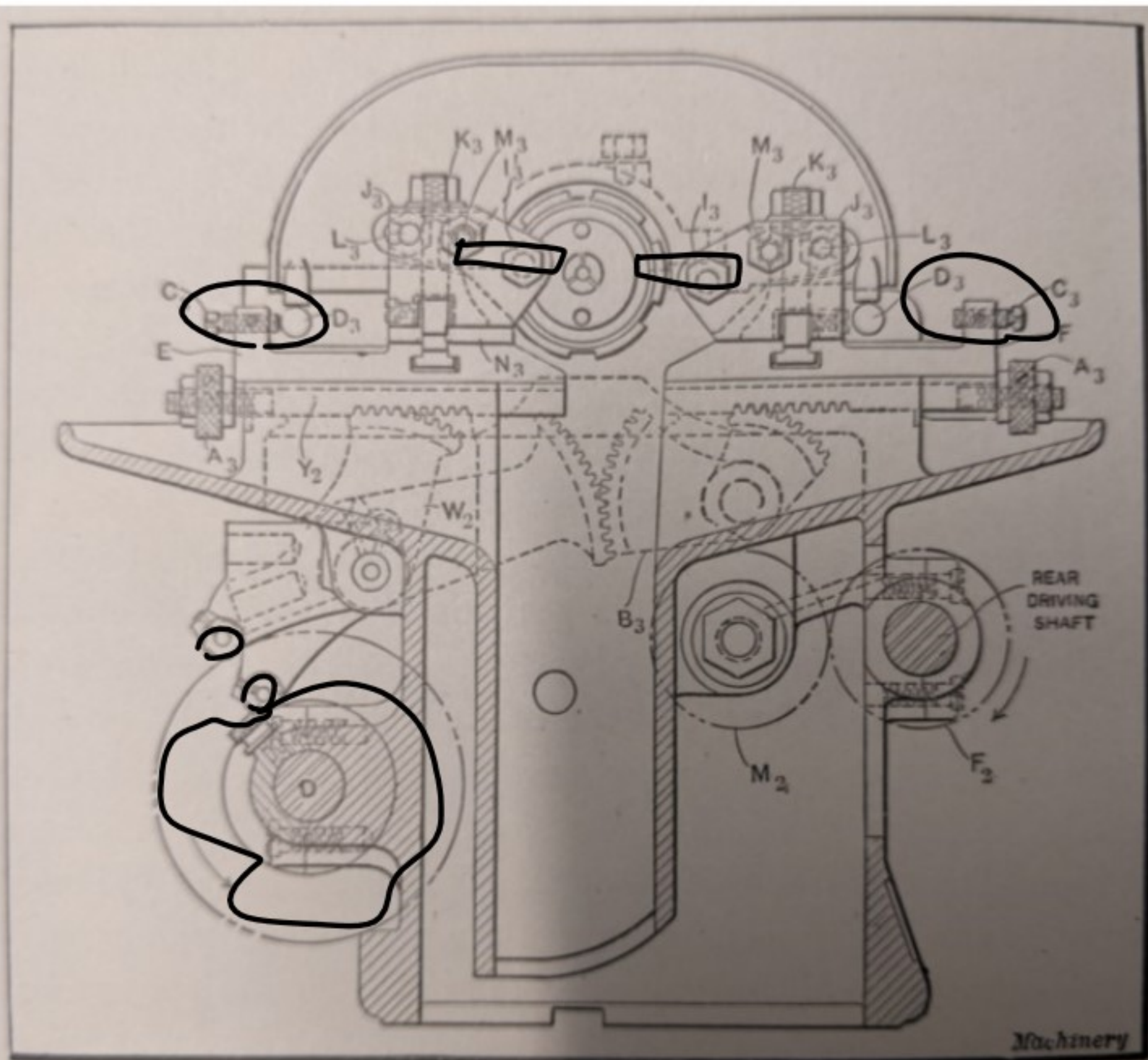


Fig. 3. Partial Section of No. 60 Machine showing Mechanism for Operating Cross-slides

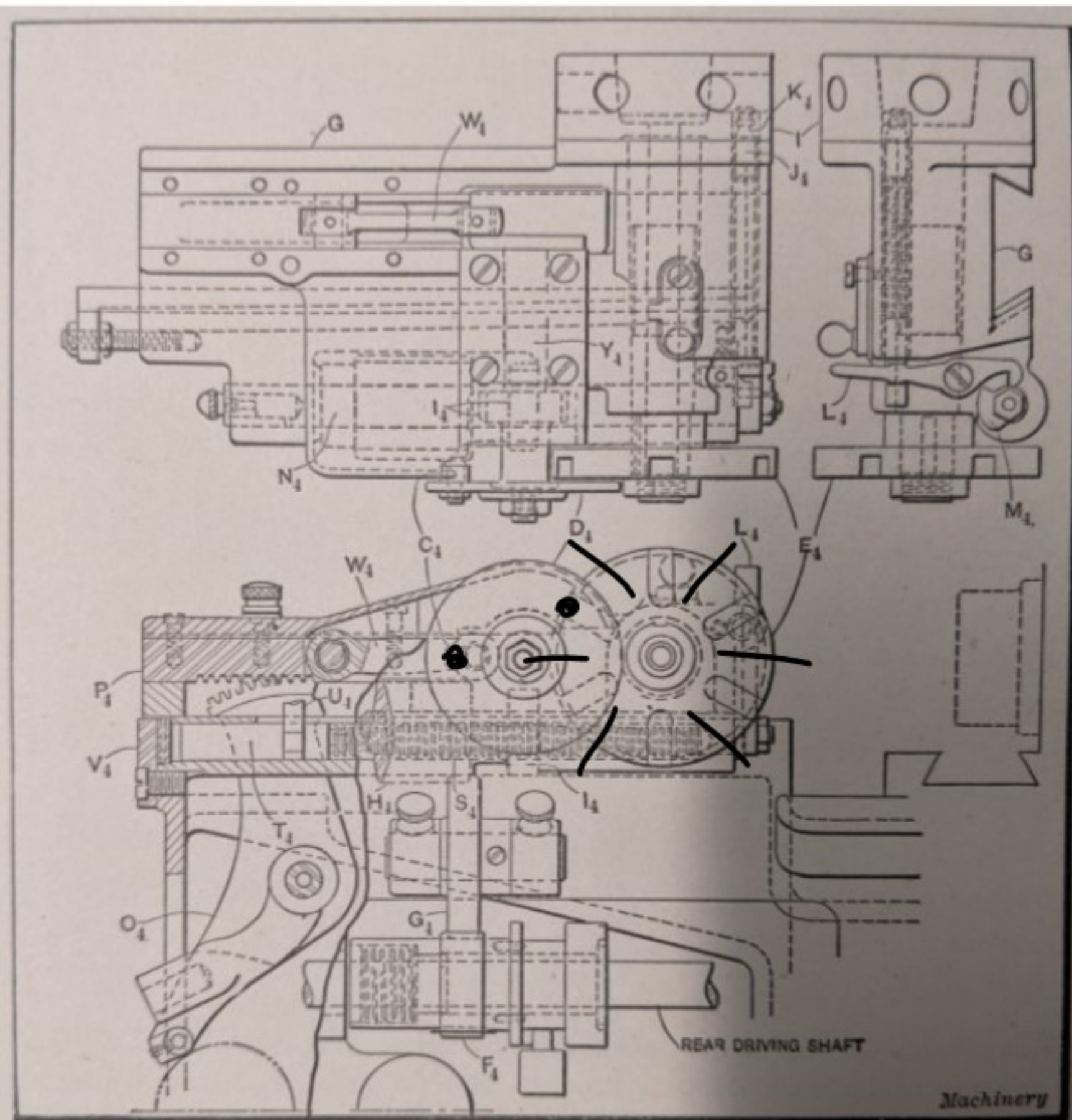


Fig. 4. Plan and Rear Elevation of Turret-slide and its Operating Mechanism

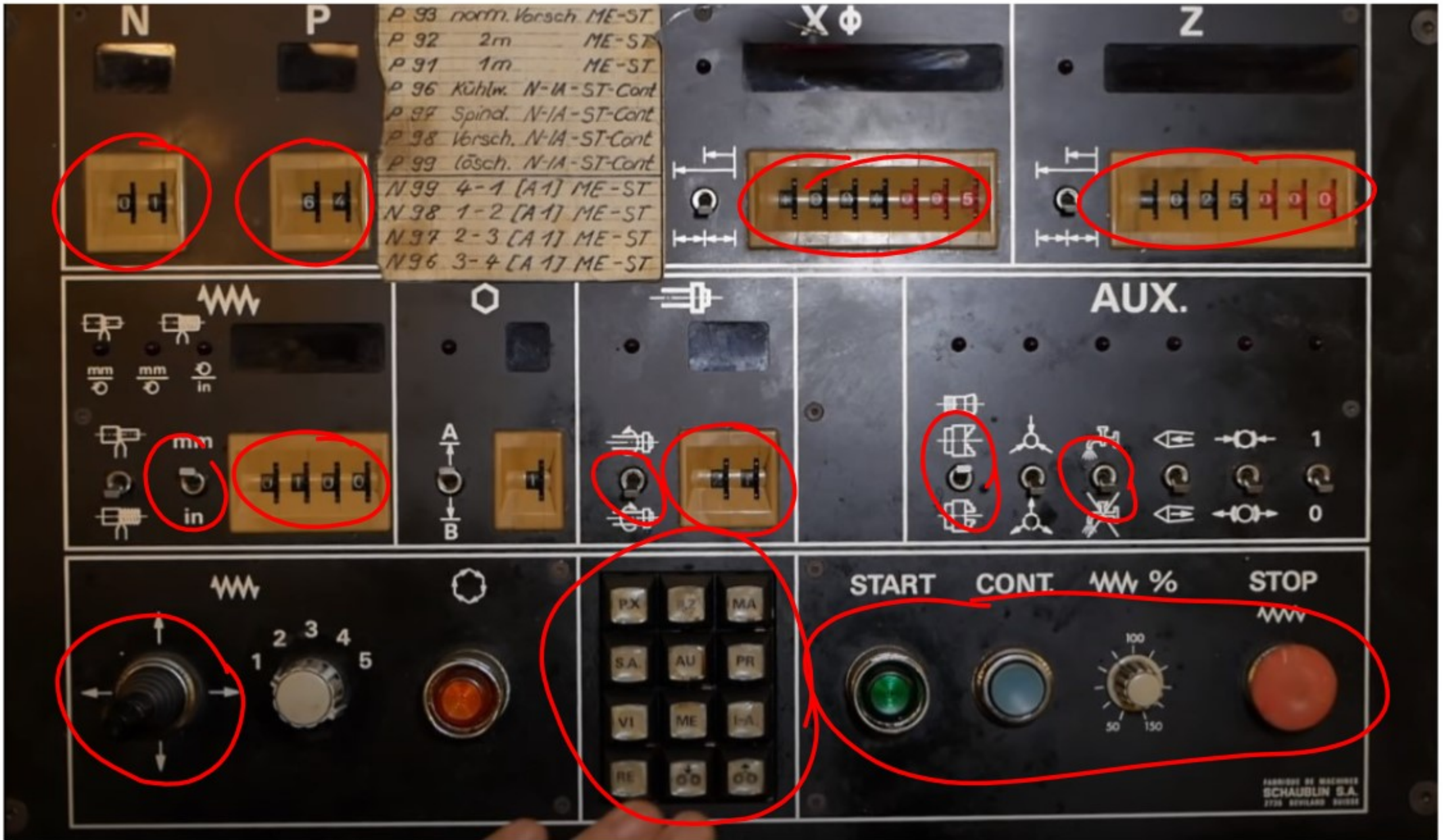
1977

Schaublin
125
CNC

1950s

Computer-
Control





1977

Data General Nova

3 MHz processor

16 KB ram

16 bit

Arduino Name

18 MHz processor

2 KB ram

8 bit

Modern CNC

C ompute

N umerical

C ontrol

N umerical

C ontrol

G code

Semi-Standardized

M codes

M03 spindle clockwise
M04 spindle counter-clockwise
M05 spindle stop

M07/08 coolant on
M09 coolant off

M06 Automatic tool change

M06 T1

M06 T2

G00 rapid

G01 linear

G01 X2 Y0 F2

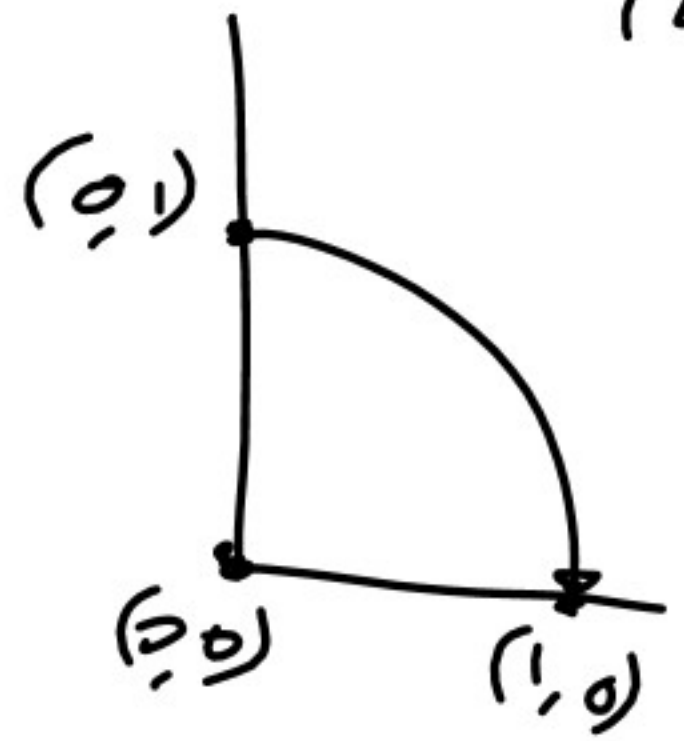
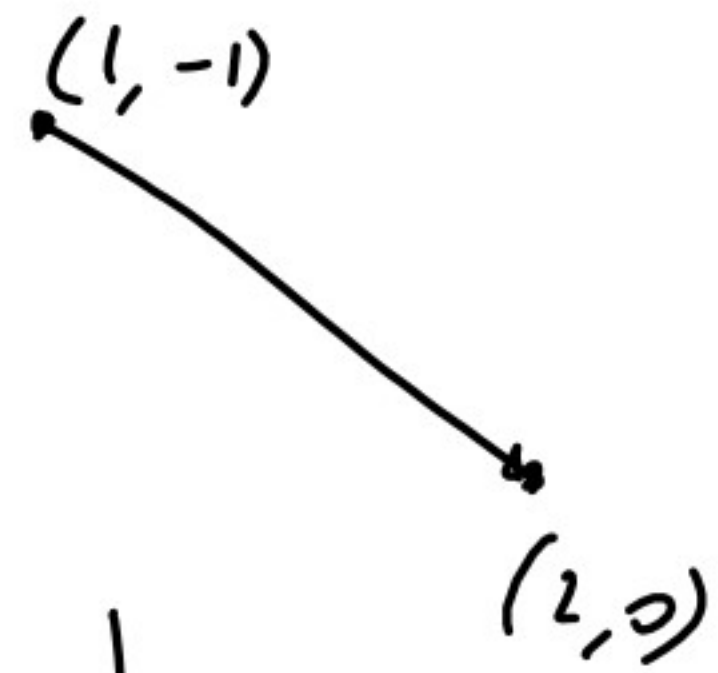
G02 clockwise arc

G03 counter clockwise arc

G02 X1 Y0 R1 F

G02 X1 Y0 I0 J0 F

G17 xy } arc plane
G18 zx }
G19 yz }



G20 inches

G21 mm

tool length comp

G32/33/34 threading

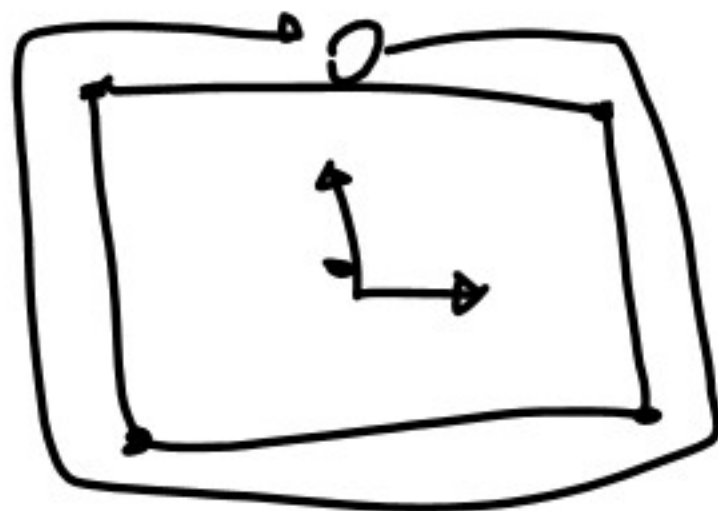
G40/41/42/43 tool compensation

G90 absolute

G91 incremental

G54-59 work coordinate systems

G10 L2 P1 X Y Z



CAD/CAM

C
A
M

ompute-
ided
anufacturing

Model → G code

- ▶ Automatic Screw Machine (<https://youtu.be/ga9T70S1XTg>)
- ▶ Automatic Screw Machine (<https://youtu.be/hCuYuwdV-Rs>)
- ▶ Automatic Screw Machine (<https://youtu.be/vvClb2NL0Do>)
- ▶ CNC Milling (<https://youtu.be/SecY2laMtfS>)
- ▶ CNC Turning (<https://youtu.be/0YJsXMMq24A>)
- ▶ 9 Axis (<https://youtu.be/cUnz8g5vHel>)
- ▶ NC Viewer (<https://ncviewer.com/>)
- ▶ Something Random
(<https://www.tiktok.com/@hoaus7750/video/7154306521000578347>)