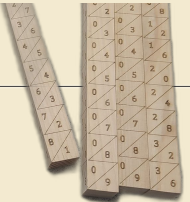
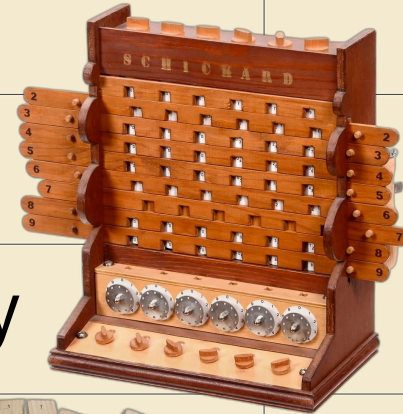
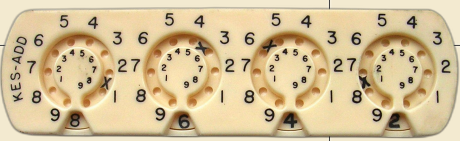
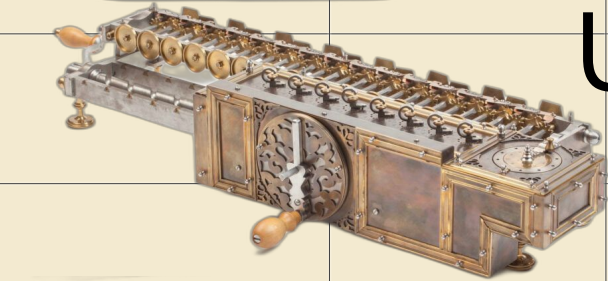
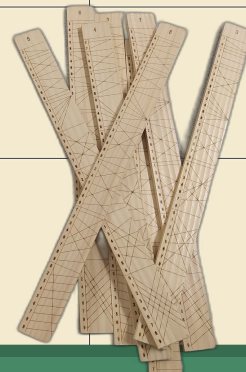
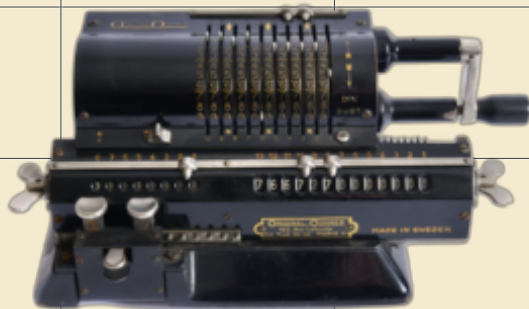
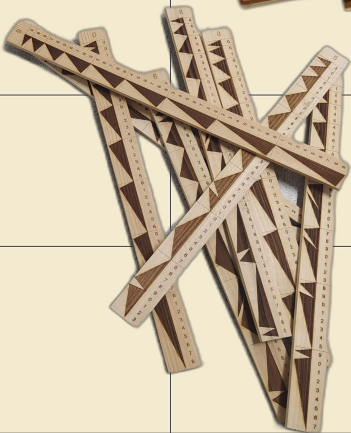
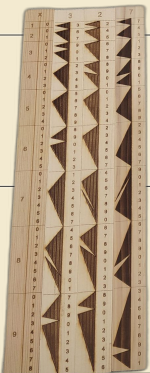


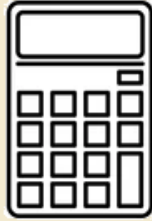
Une brève histoire des machines à calculer mécaniques



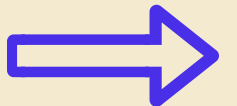
par François Delannoy

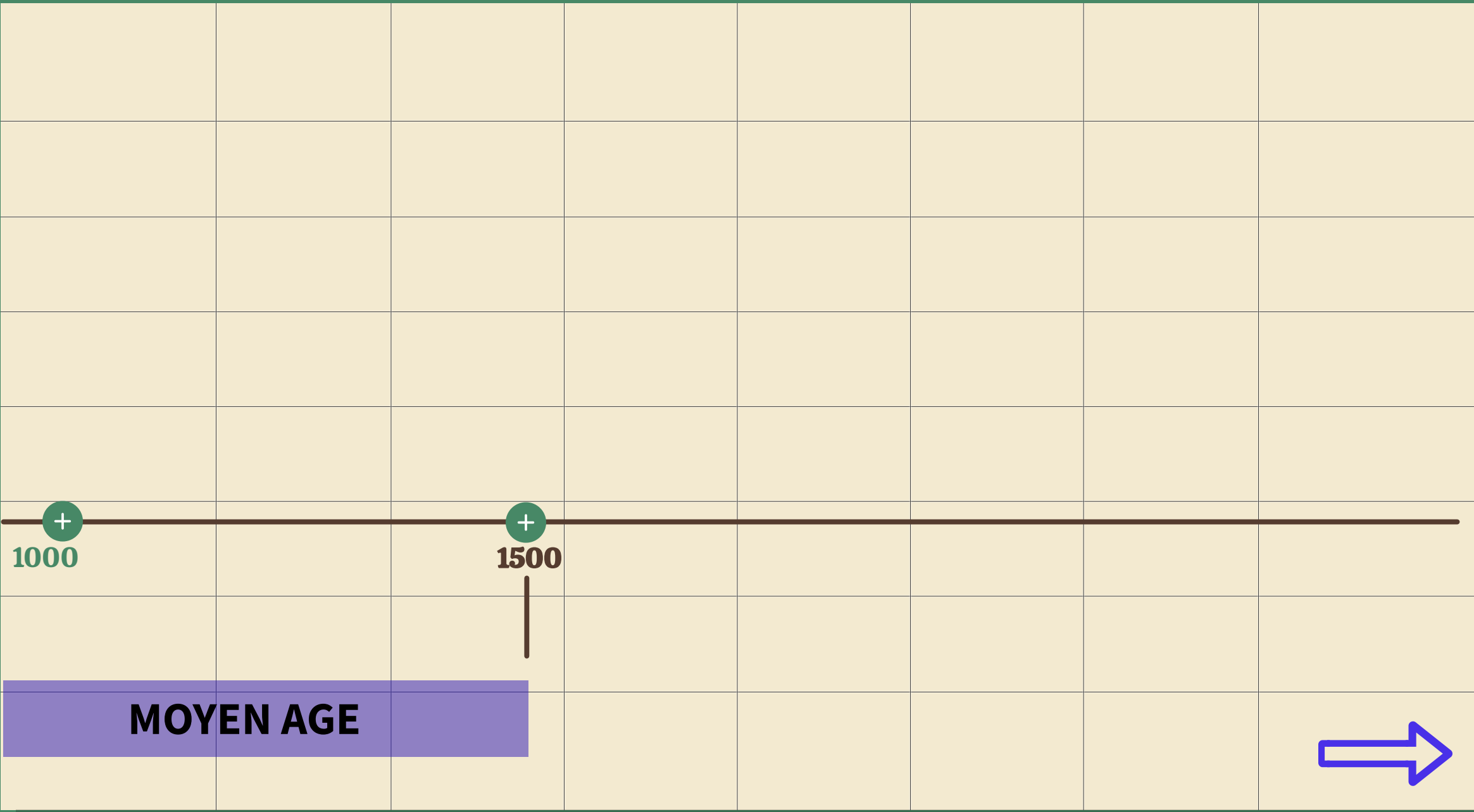


Systeme de
numération adapté ...



Techniques en
mécanique de précision
suffisamment adaptées





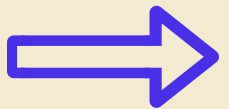
+

1000

+

1500

MOYEN AGE





+

1000

Gerber D'Aurillac
Pape Sylvestre II

+

1500

MOYEN AGE



C D S			C D S		
			9		8
				9	5
		1			3

\bar{c}	\bar{x}	\bar{i}	c	x	i
				1	3
				8	7
		5		1	6
5			b	6	
			b	3	6
1				4	b

13
87
4 019
400 520
539
100 065



Systeme de
numération adapté ...



Techniques en
mécanique de précision
suffisamment adaptées





+

1000

Gerber D'Aurillac
Pape Sylvestre II

+

1500

MOYEN AGE



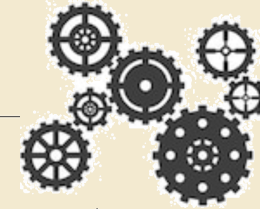
Systeme de
numeration adapte ...



... accepte et repandu



Techniques en
mecanique de precision
suffisamment adaptees



Systeme de
numeration adapte ...



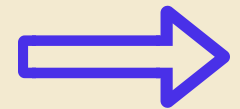
... accepte et repandu

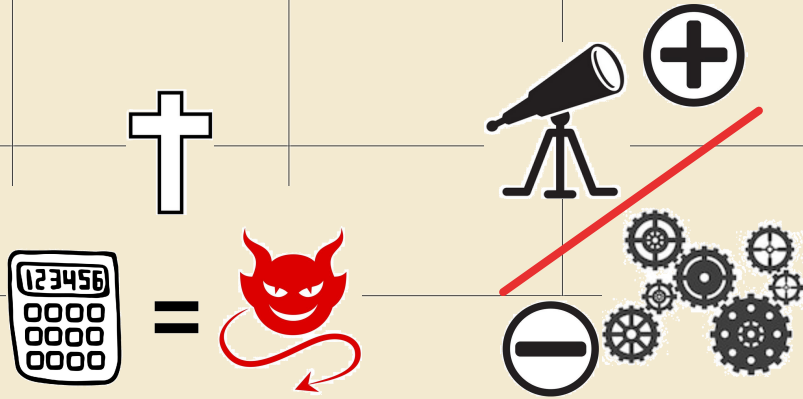


Philosophie



Techniques en
mecanique de precision
suffisamment adaptees





+
1000

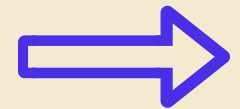
Gerber D'Aurillac
Pape Sylvestre II

+
1500

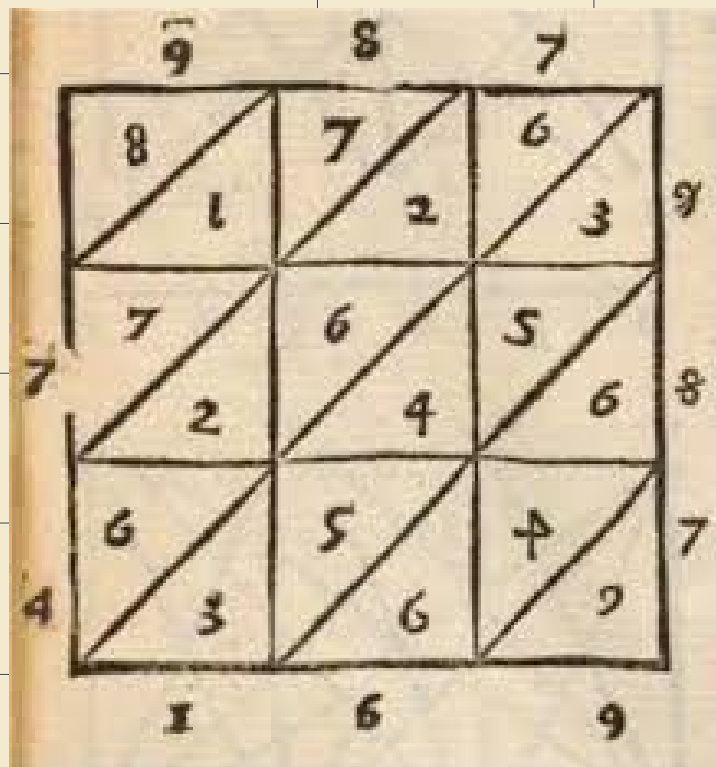
+
1600

MOYEN AGE

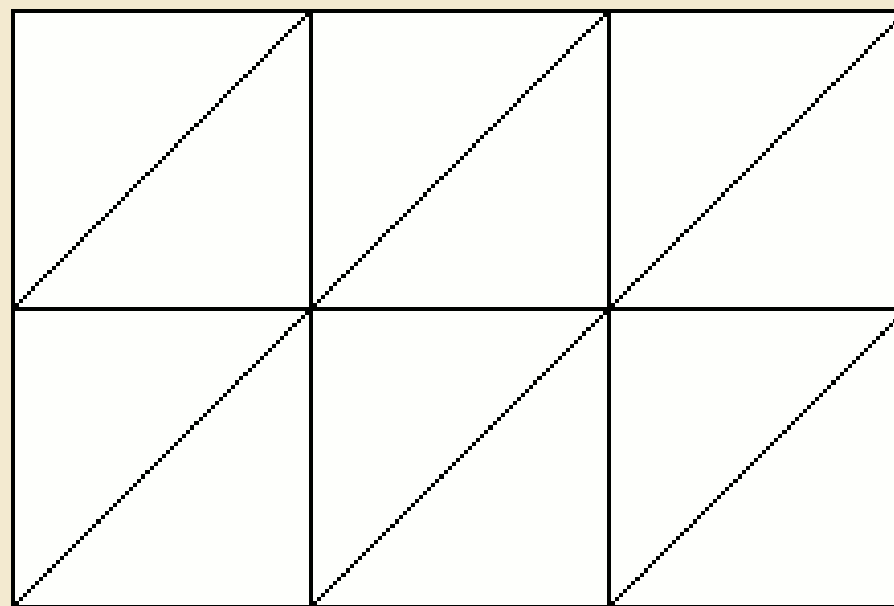
RENAISSANCE



$$451 \times 35 = ?$$



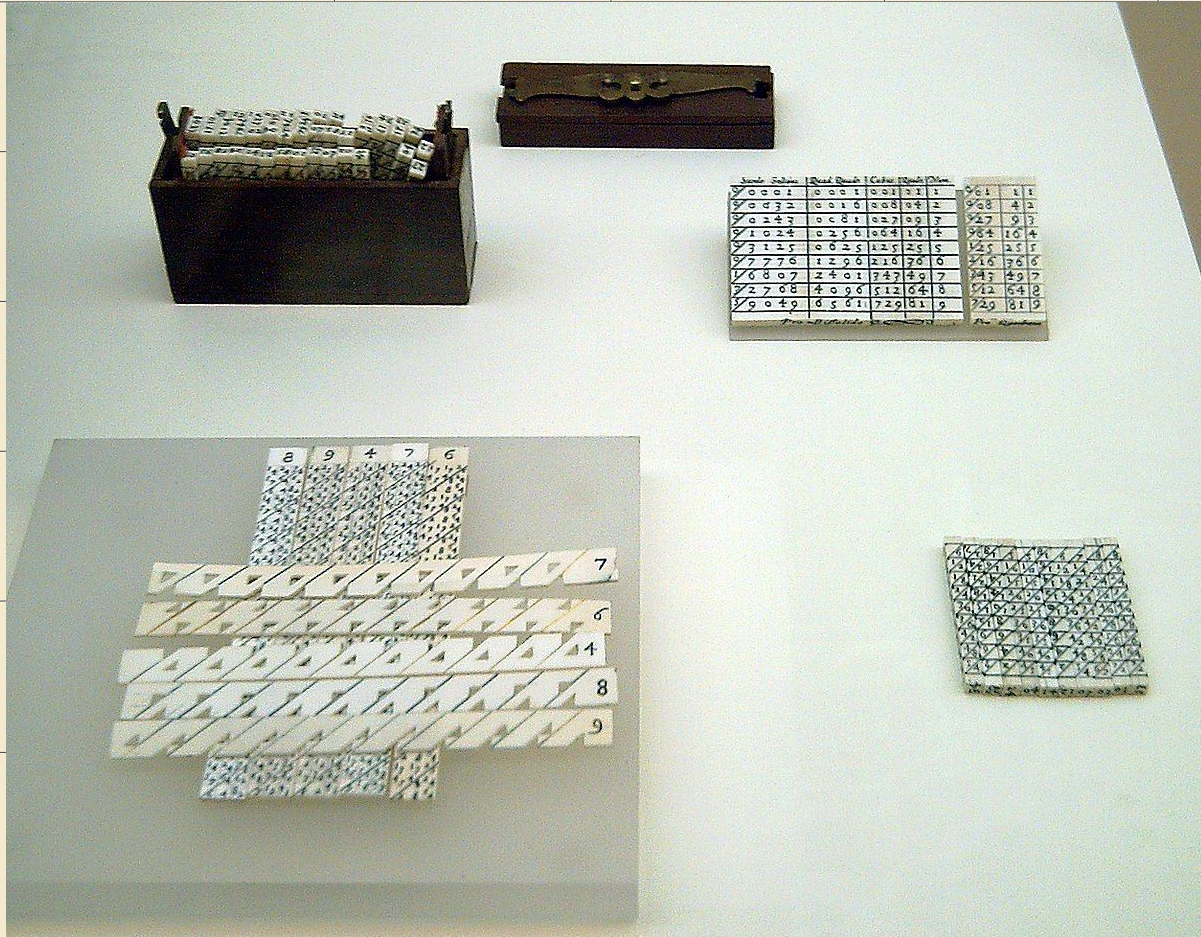
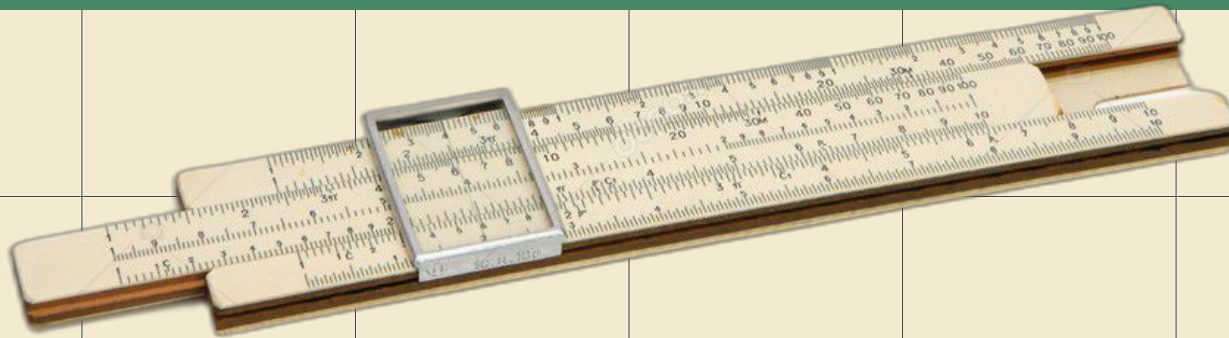
$$451 \times$$



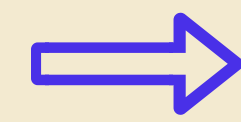
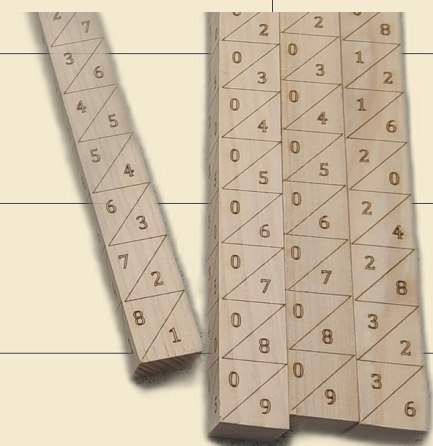
3

5





x	5	2	3
1	0 5	0 2	0 3
2	1 0	0 4	0 6
3	1 5	0 6	0 9
4	2 0	0 8	1 2
5	2 5	1 0	1 5
6	3 0	1 2	1 8
7	3 5	1 4	2 1
8	4 0	1 6	2 4
9	4 5	1 8	2 7



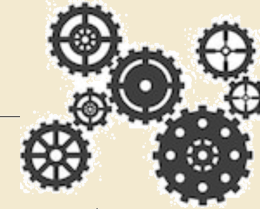
Systeme de
numeration adapte ...



Techniques en
mecanique de precision
suffisamment adaptees



... accepte et repandu

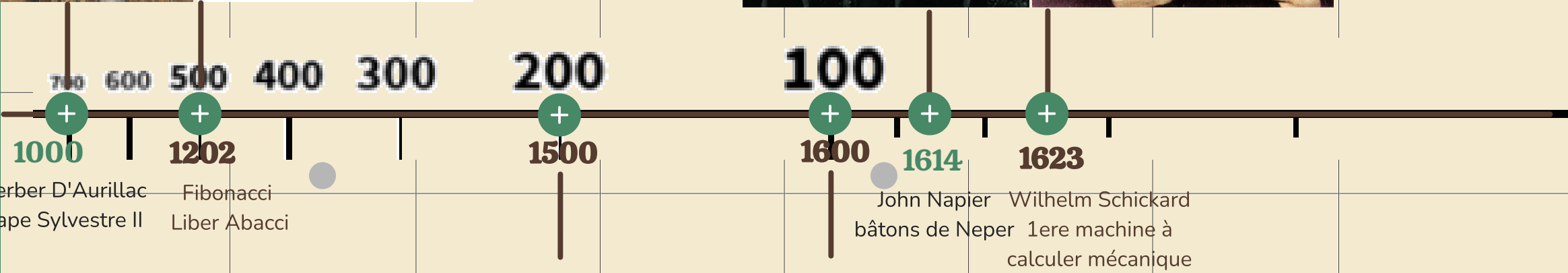
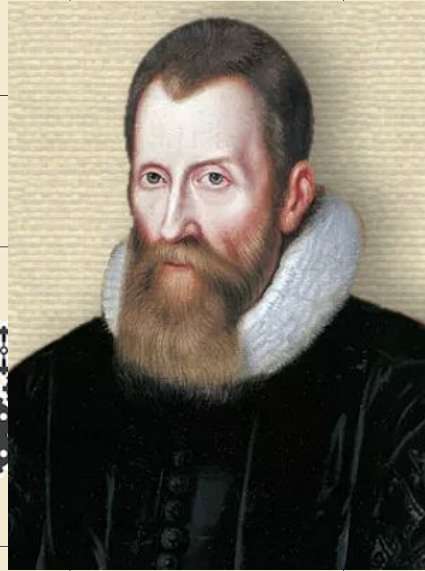
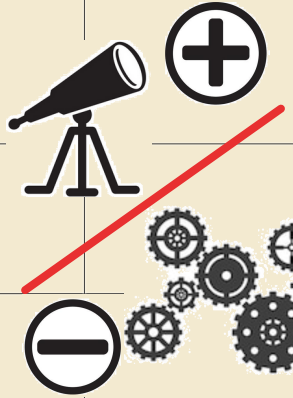


Philosophie



Une utilite ?
La comptabilite et le
commerce



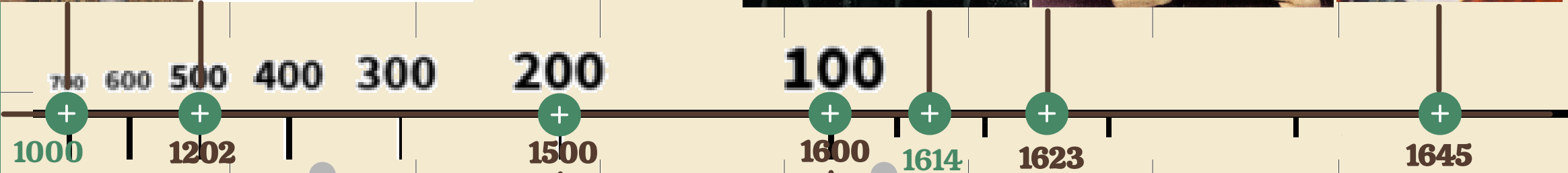
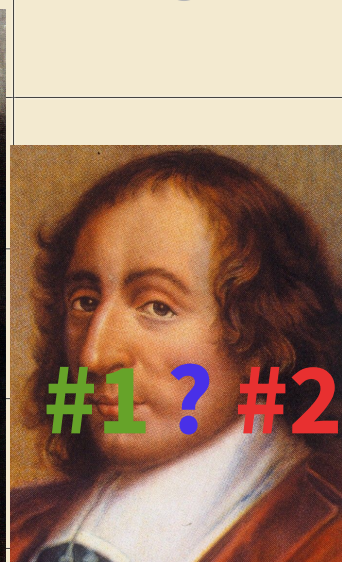
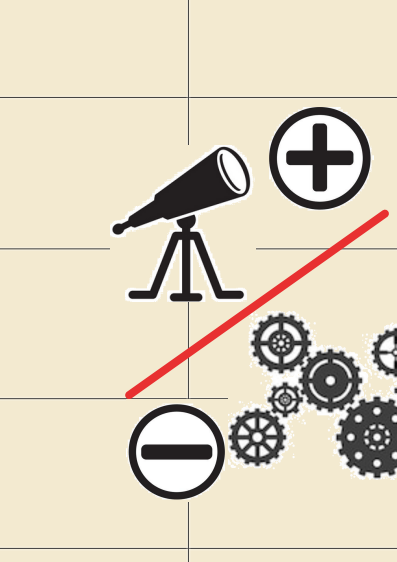


MOYEN AGE

RENAISSANCE

EPOQUE MODERNE





Gerber D'Aurillac
Pape Sylvestre II

Fibonacci
Liber Abacci

1500

1600
John Napier
bâtons de Neper

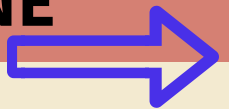
1623
Wilhelm Schickard
1ere machine à
calculer mécanique

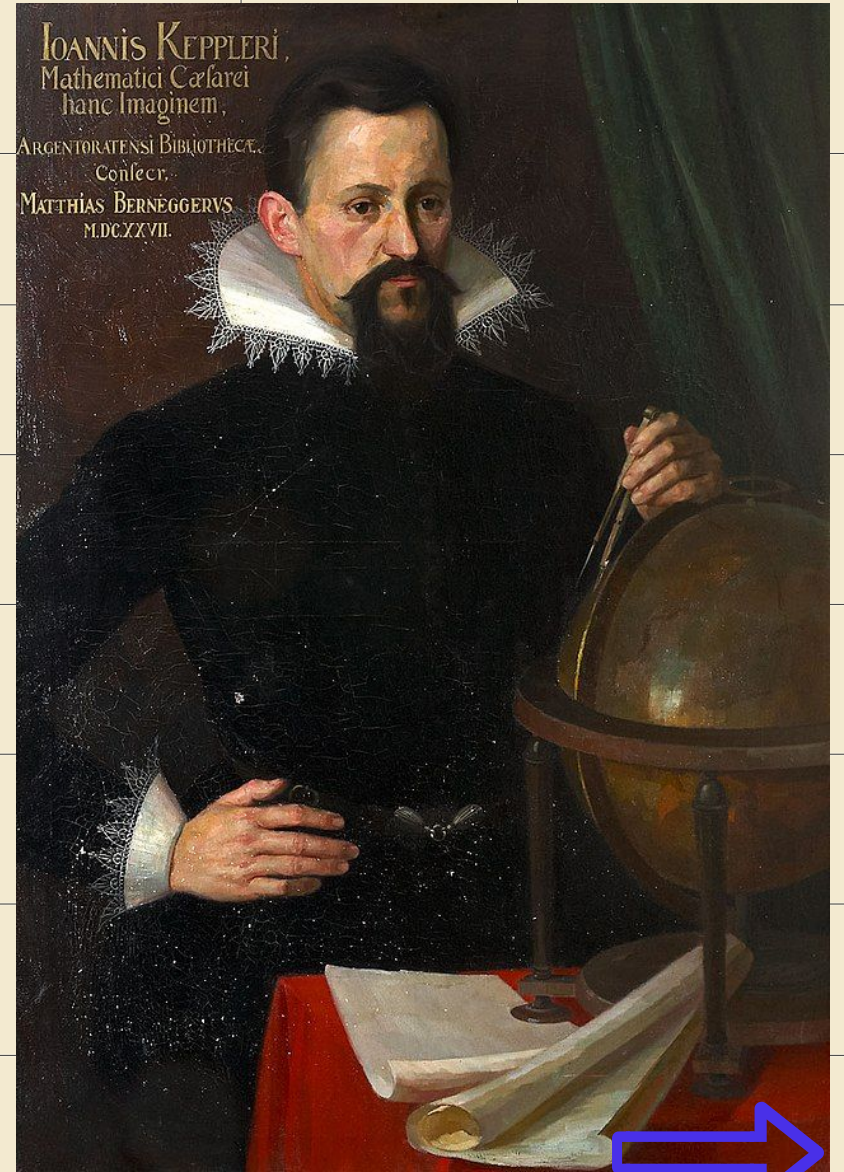
1645
Blaise Pascal
1ere machine à
calculer mécanique

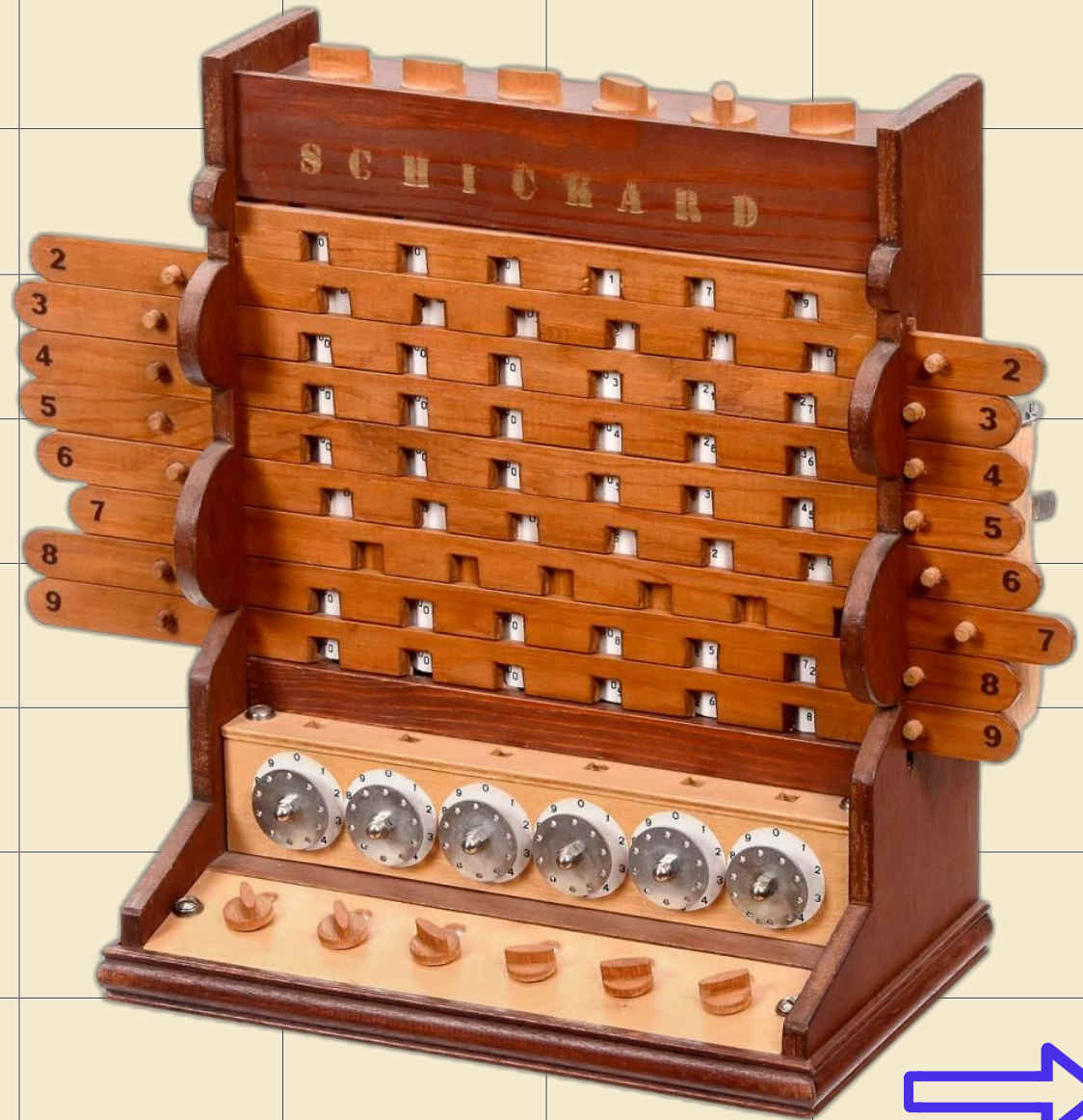
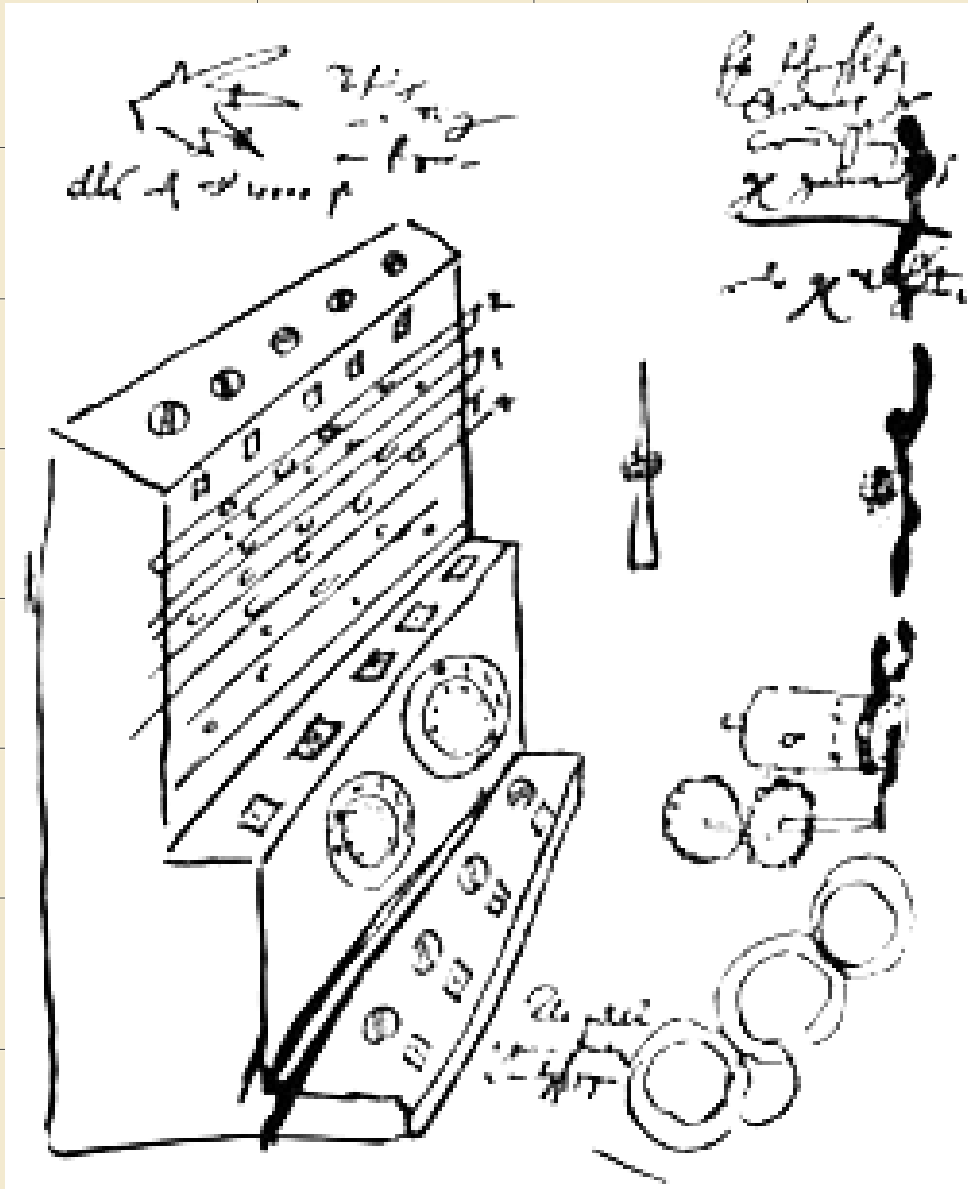
MOYEN AGE

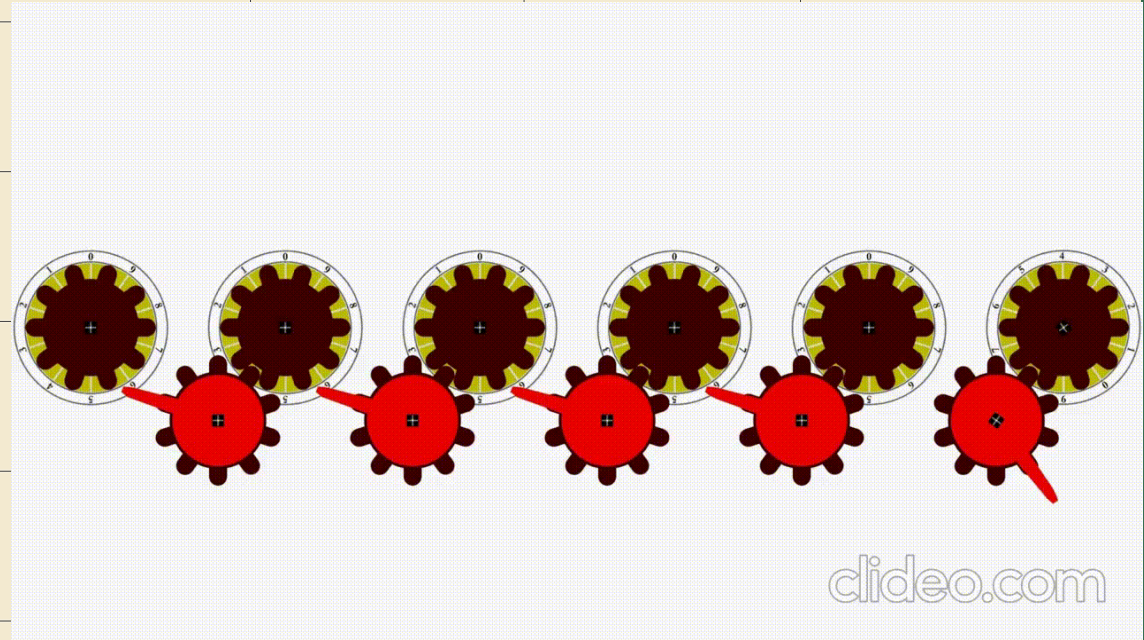
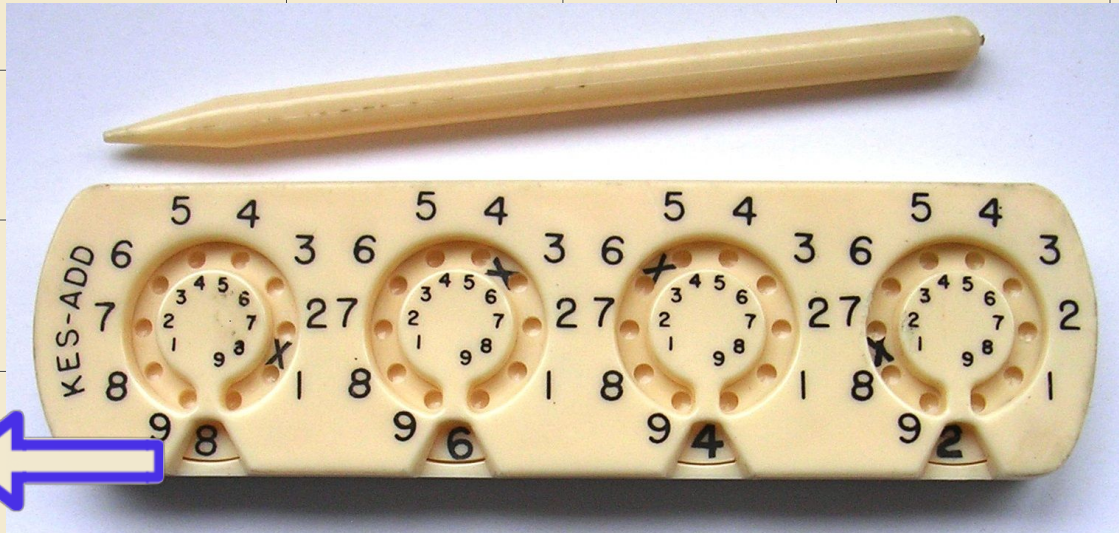
RENAISSANCE

EPOQUE MODERNE

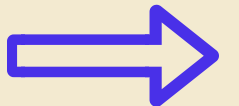


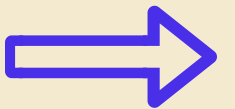


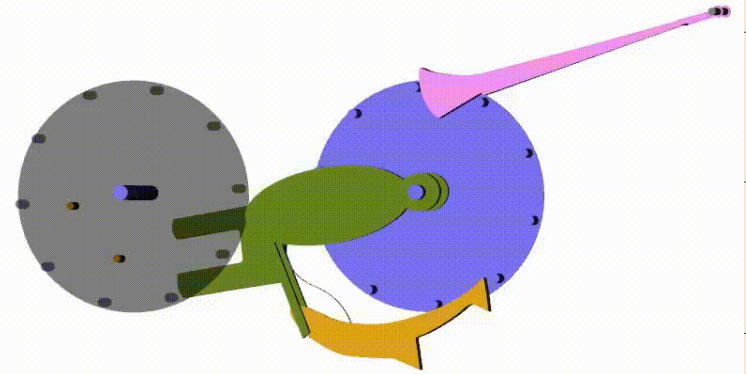
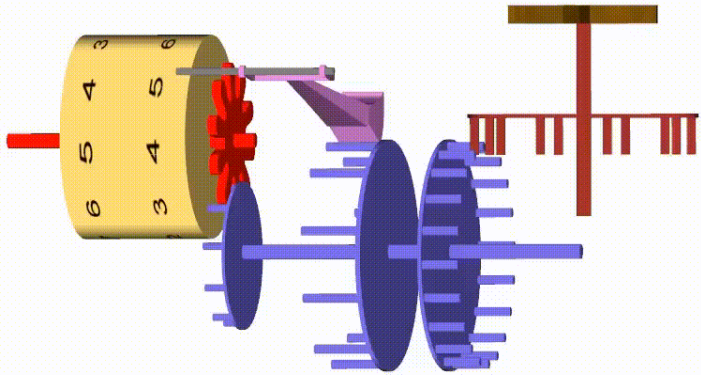
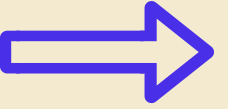


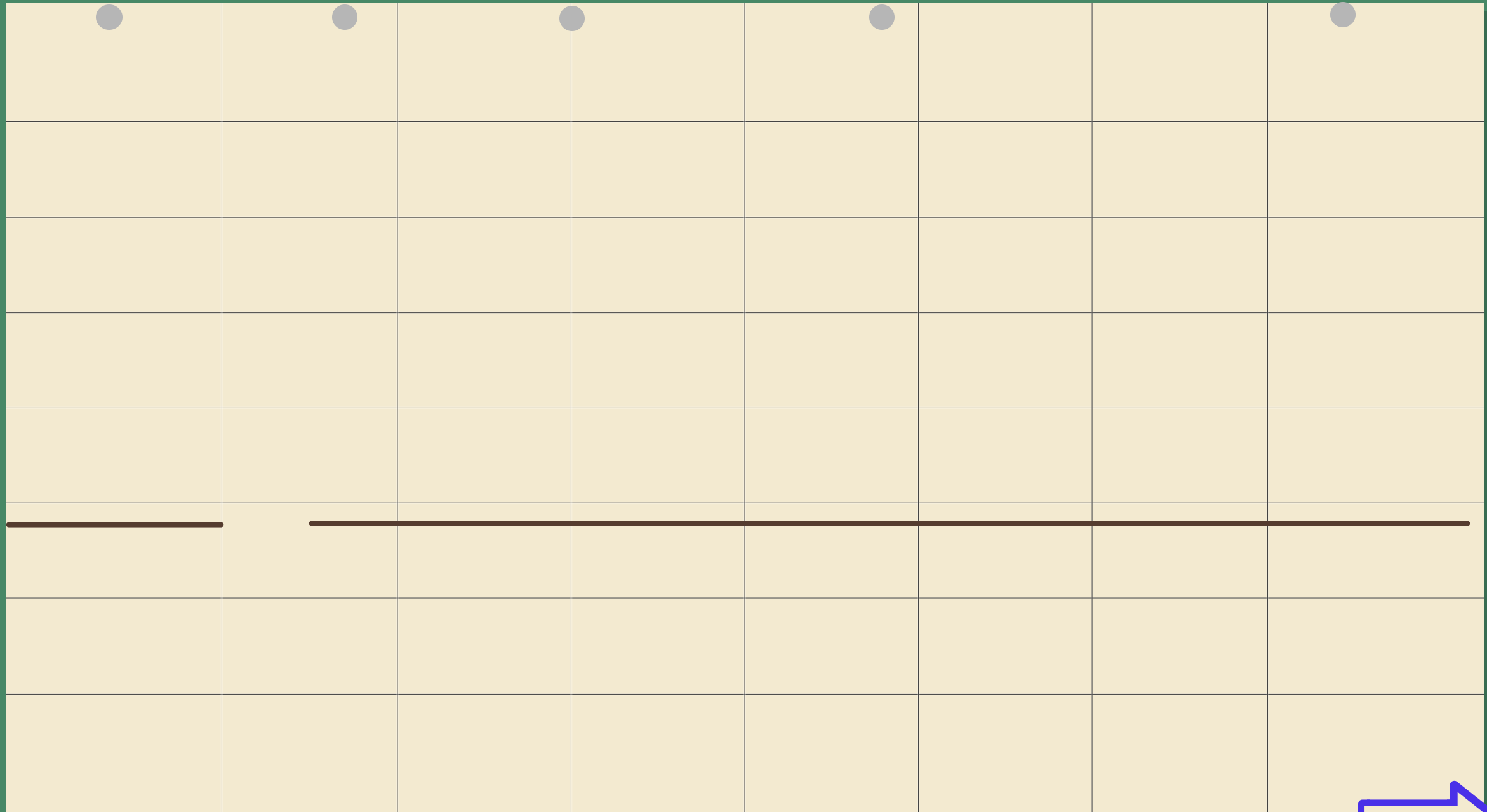


clideo.com











+

1671

Gottfried Wilhelm
Leibniz





+

1671

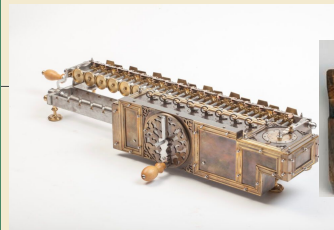
Gottfried Wilhelm
Leibniz



+

1820

Thomas de Colmar

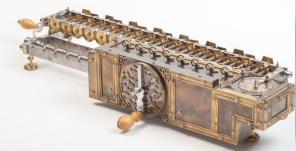




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1671

Gottfried Wilhelm
Leibniz



+

1820

Thomas de Colmar



+

1873

Willgdt Theophil
Odhner



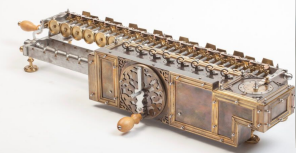


Les additionneuses

+

1671

Gottfried Wilhelm
Leibniz



+

1820

Thomas de Colmar



+

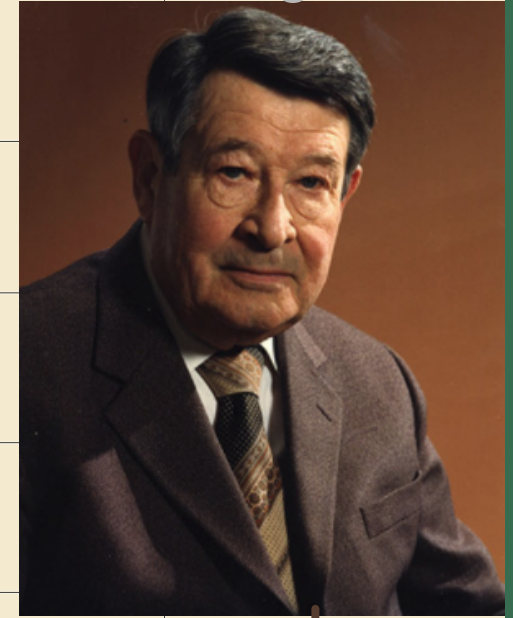
1873

Willgdt Theophil
Odhner



+





Les additionneuses

+

1671

Gottfried Wilhelm
Leibniz



+

1820

Thomas de Colmar



+

1873

Willgdth Theophil
Odhner



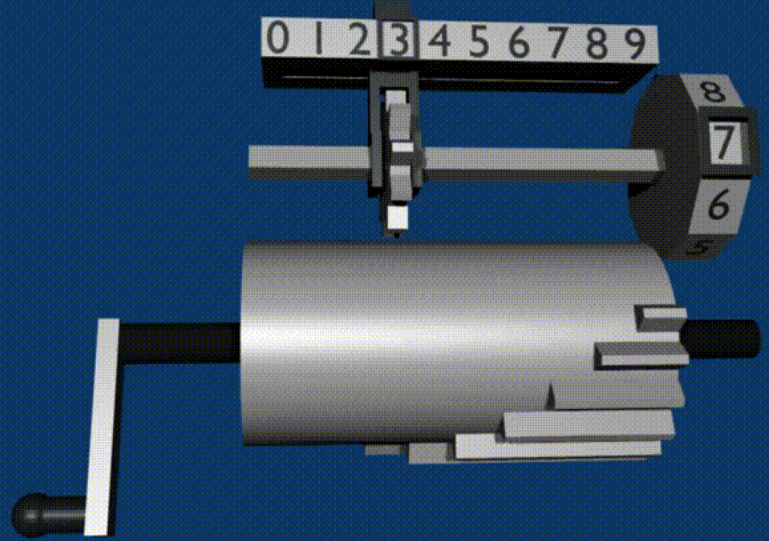
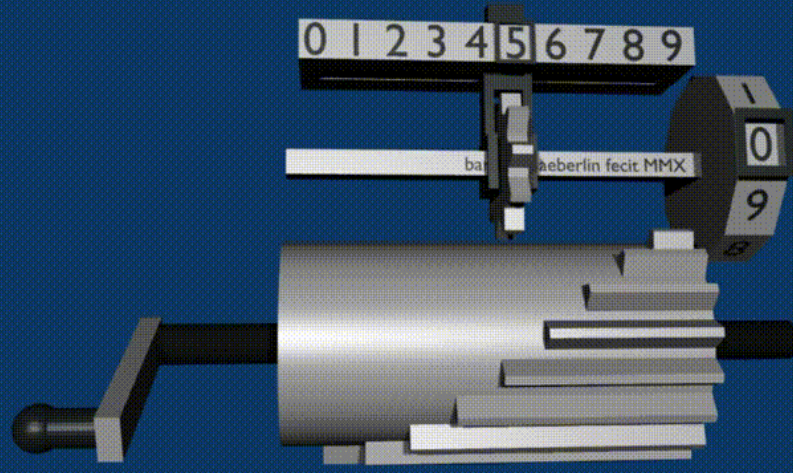
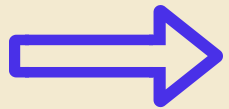
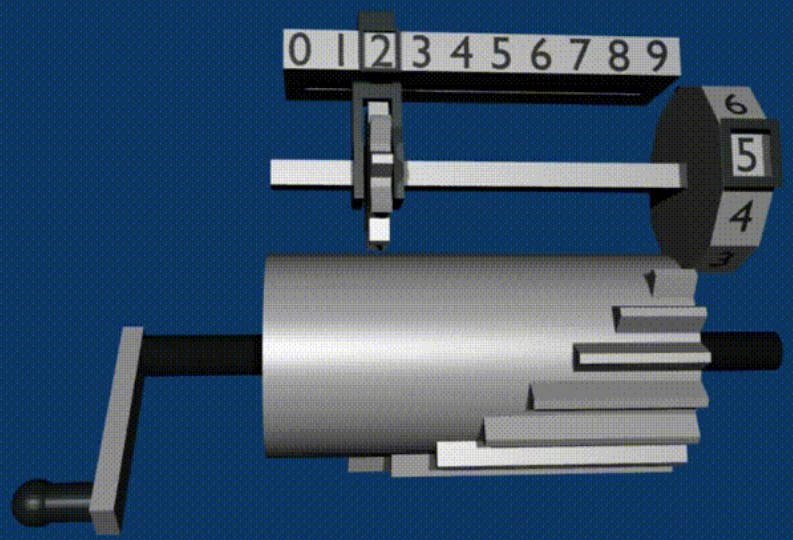
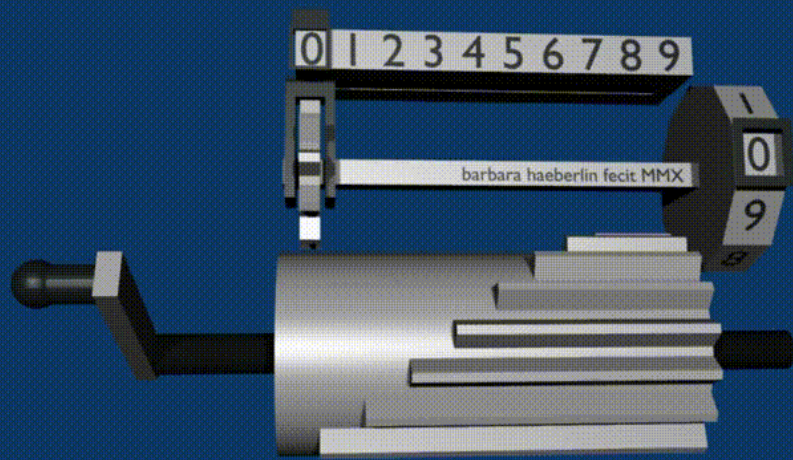
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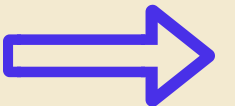
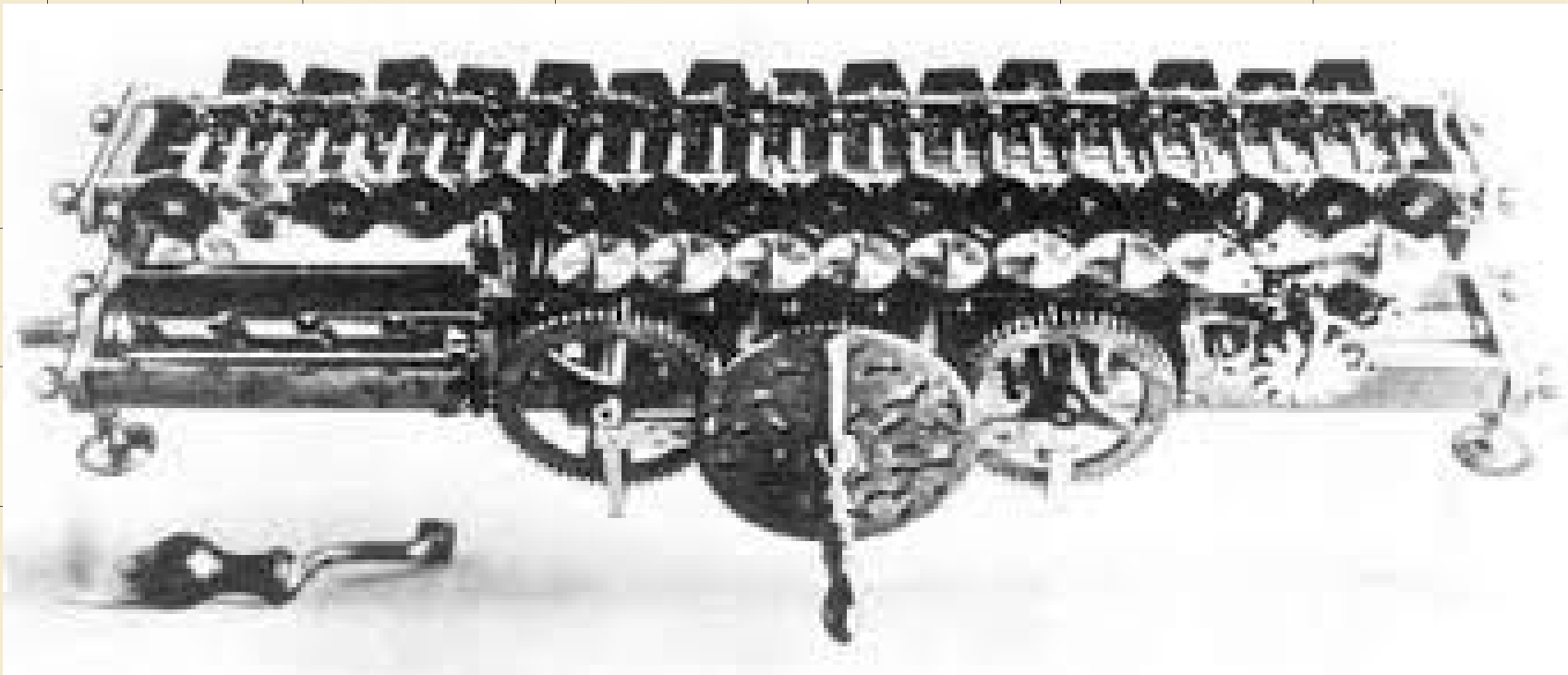
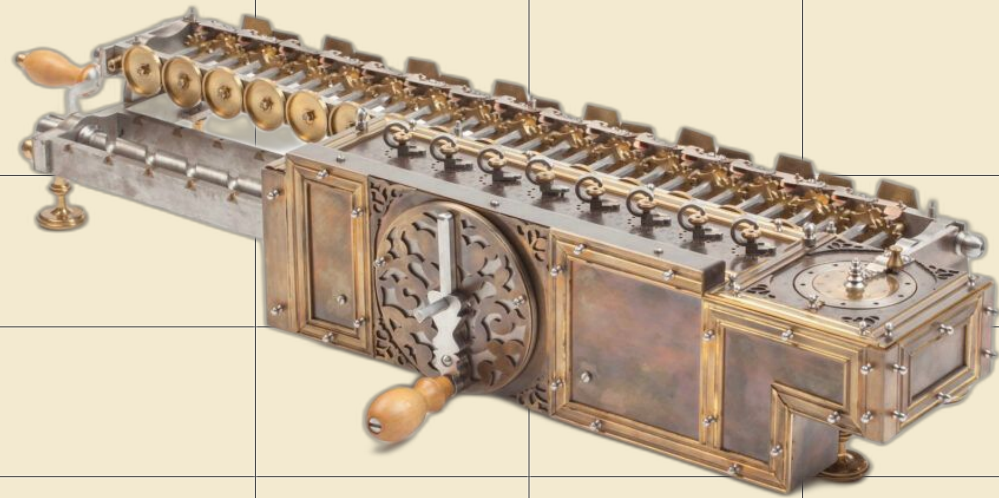
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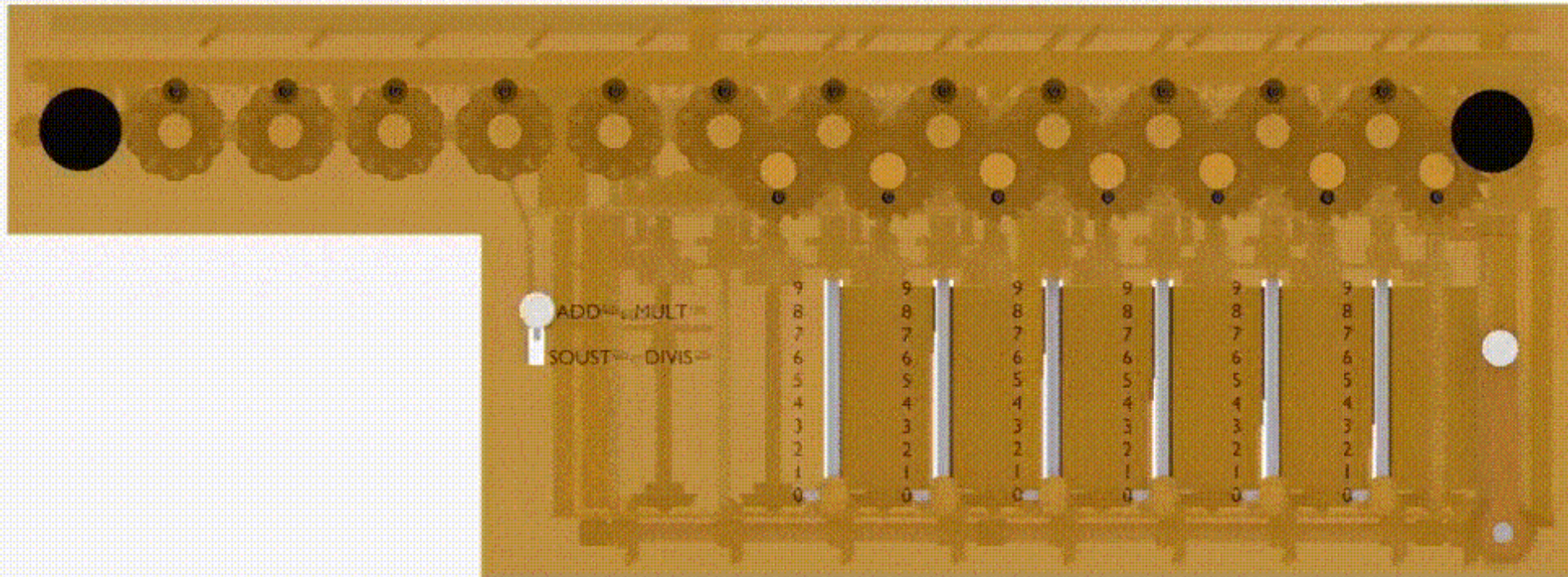
1947

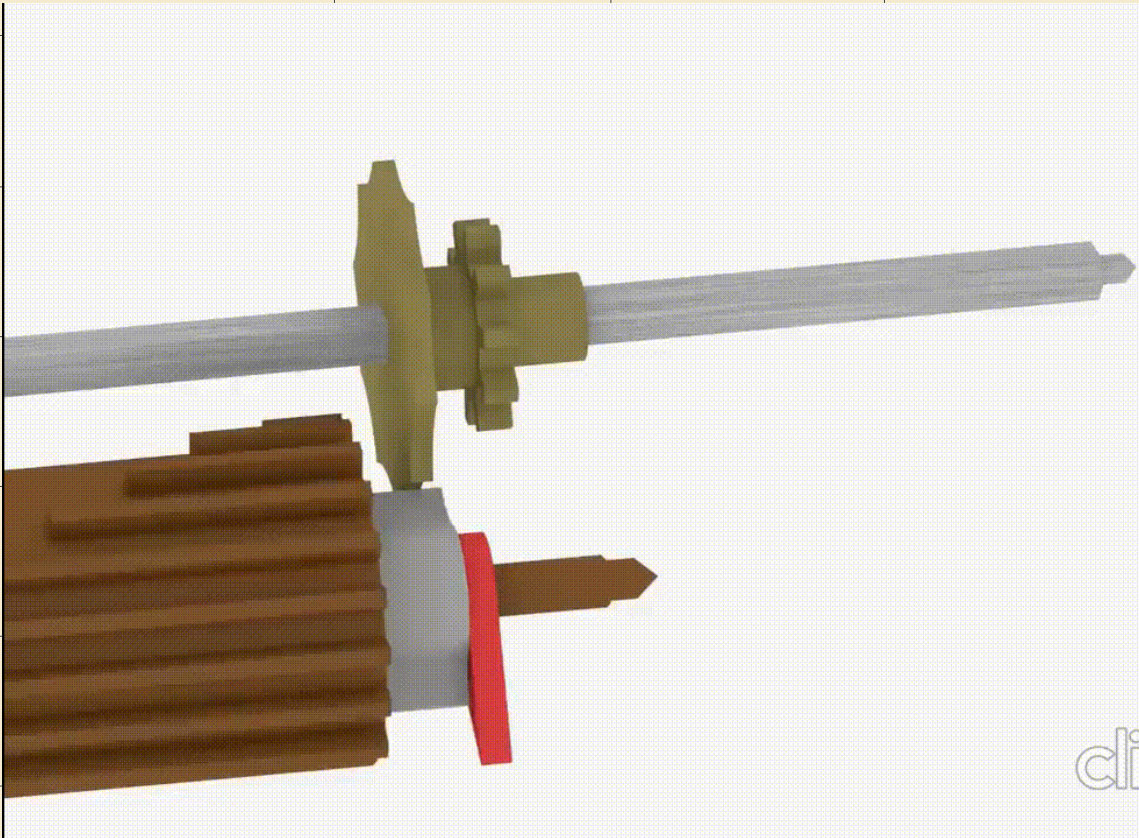
Curt Herzstark
Curta



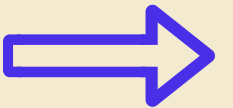
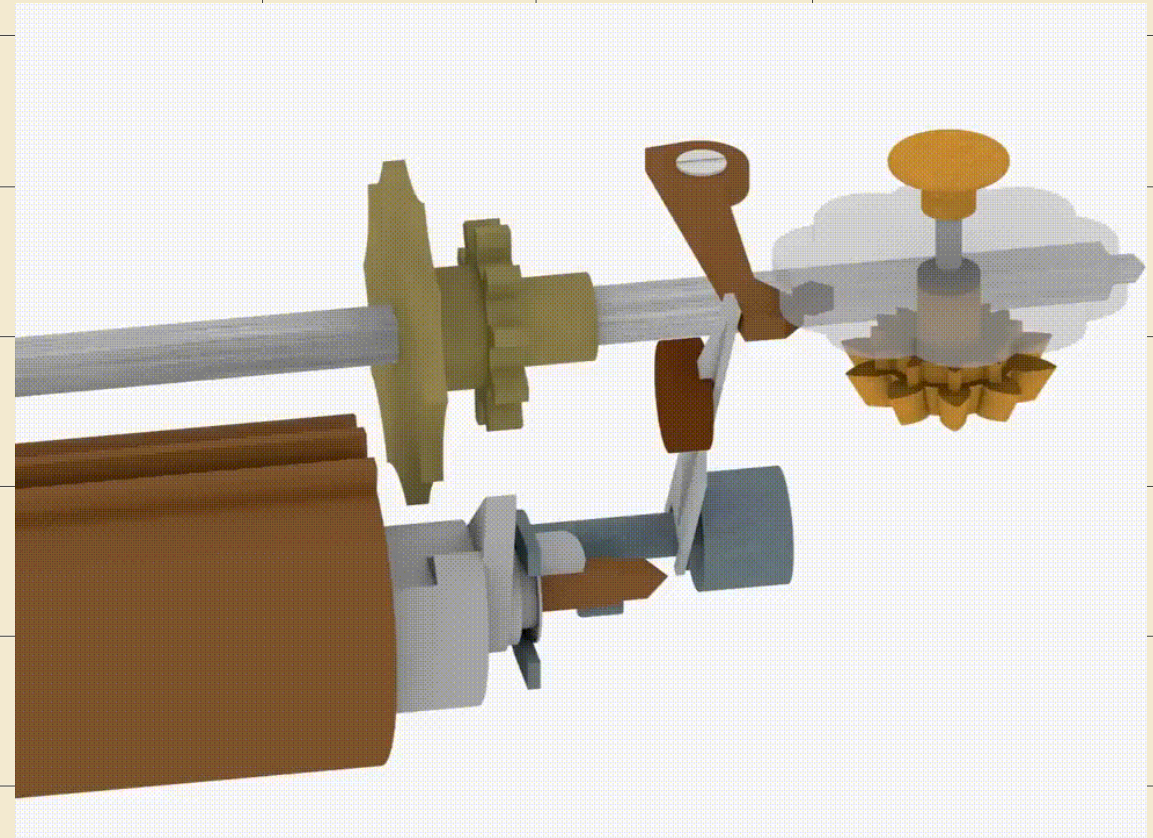


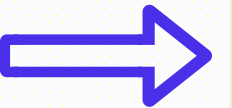
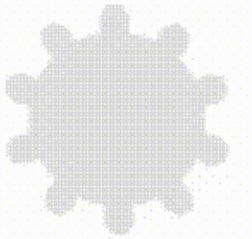
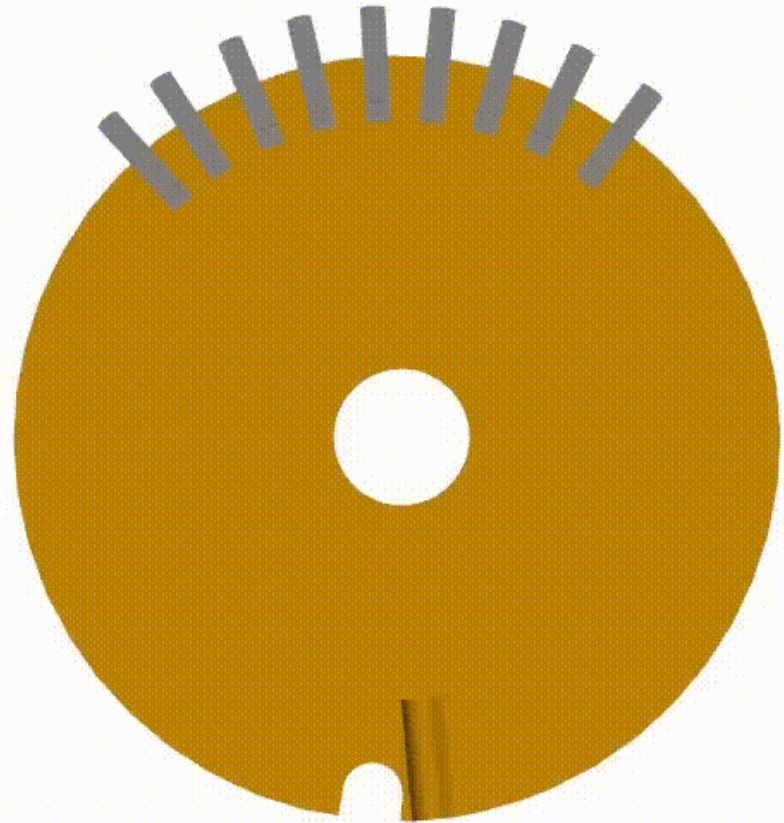
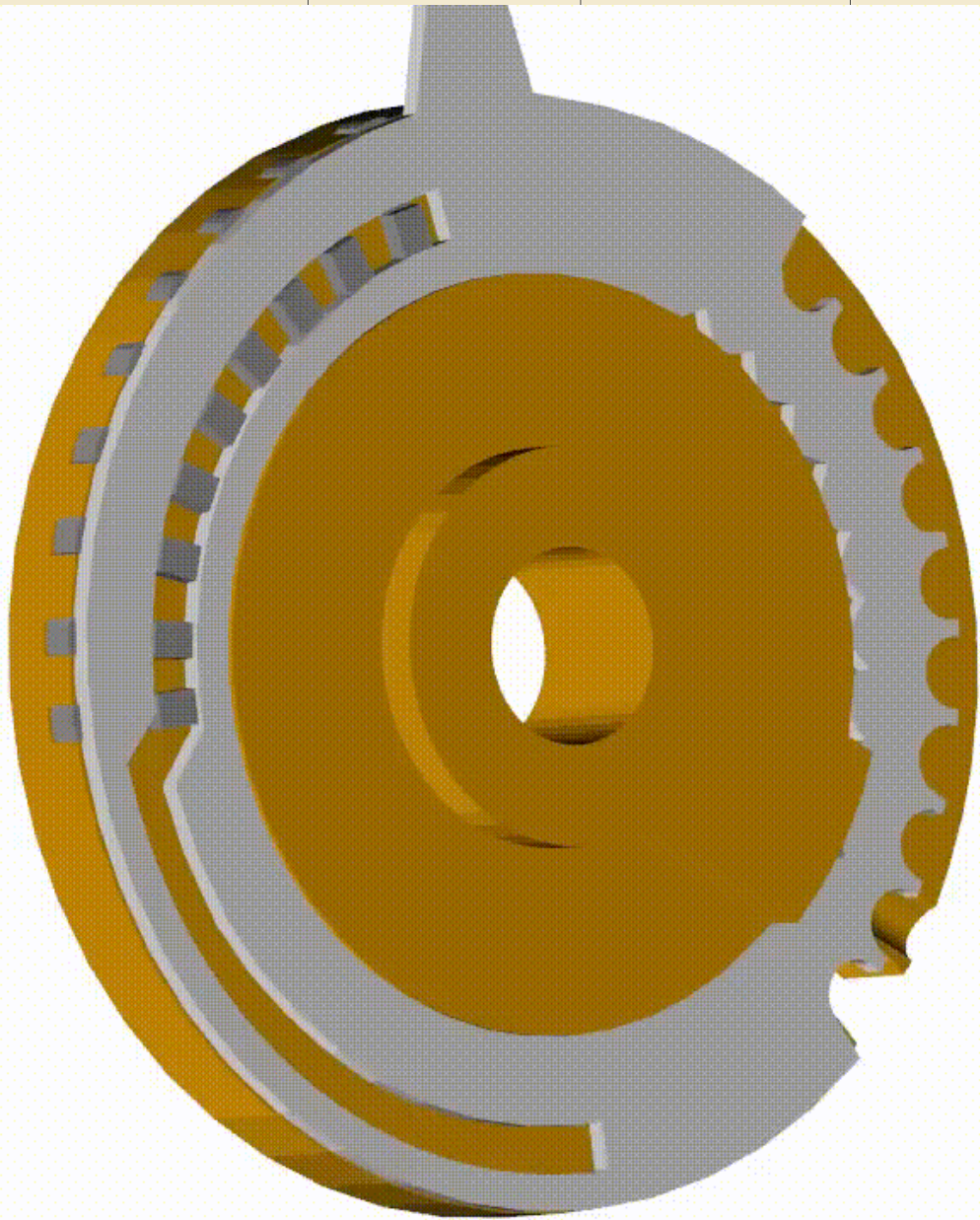


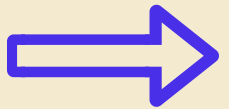
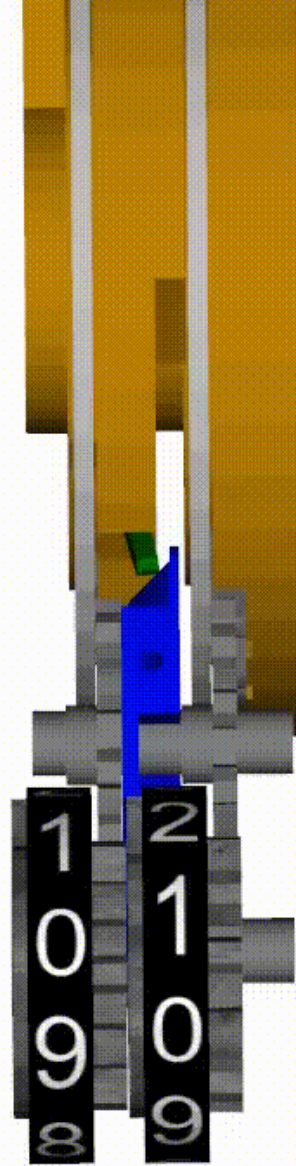
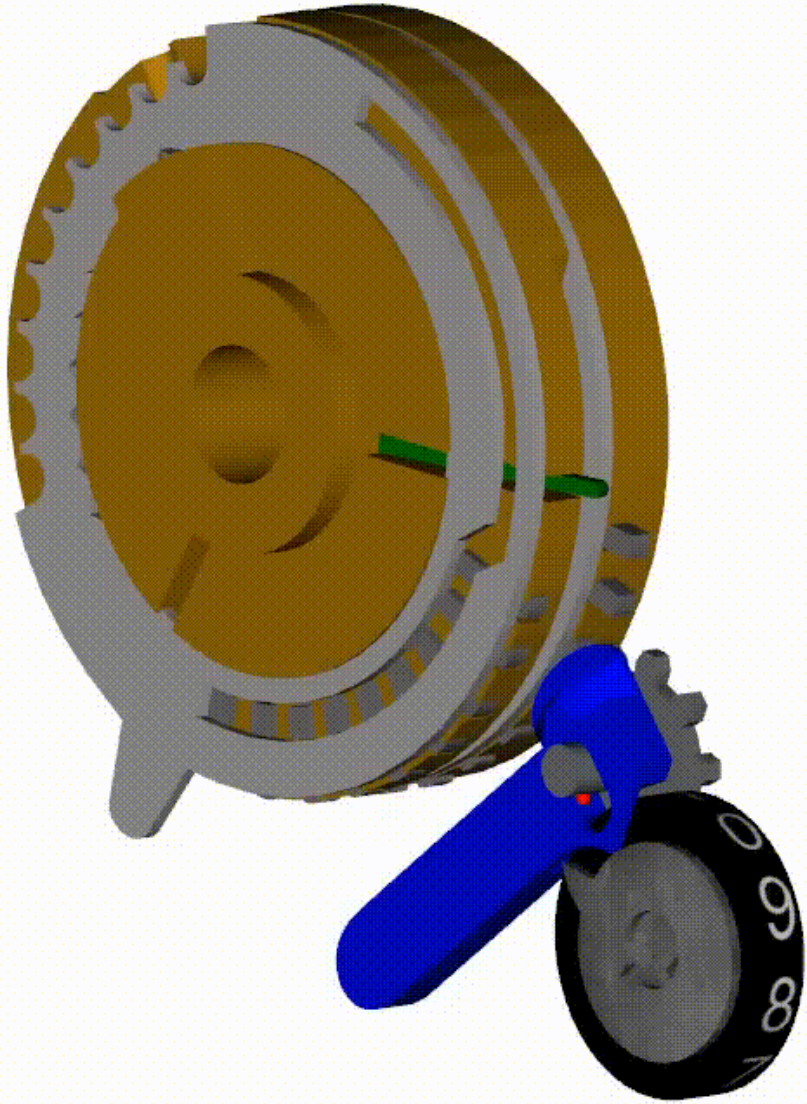




click





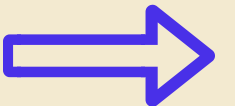


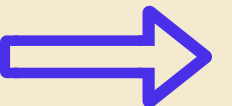
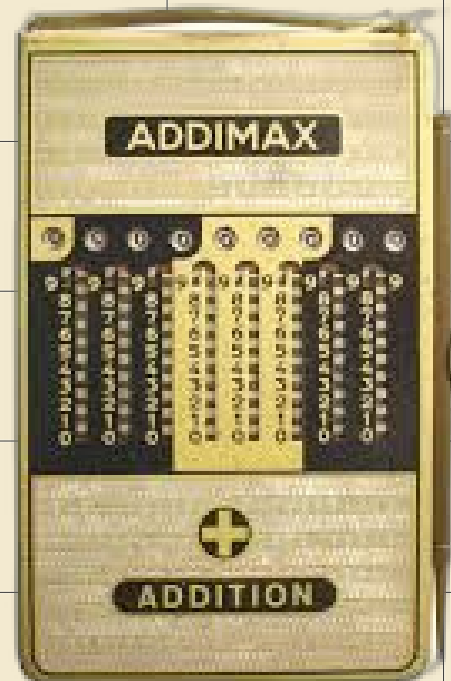
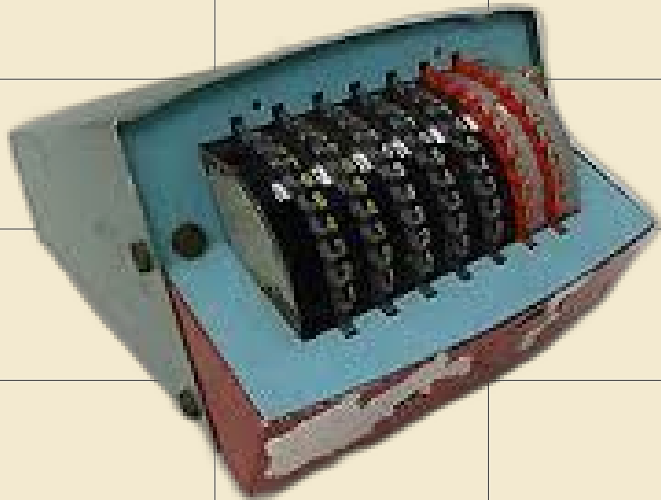
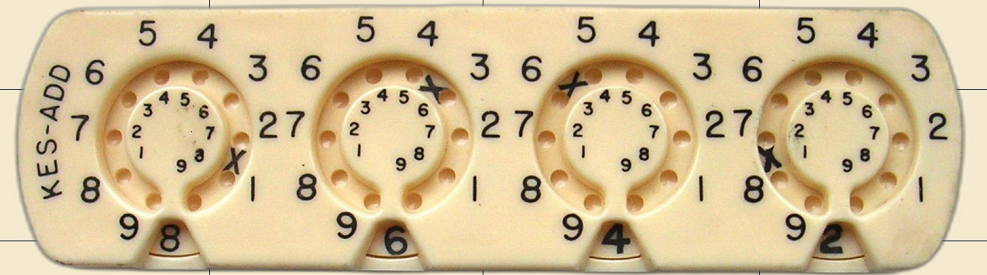


1770

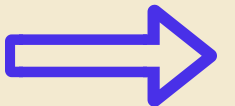
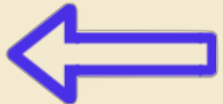
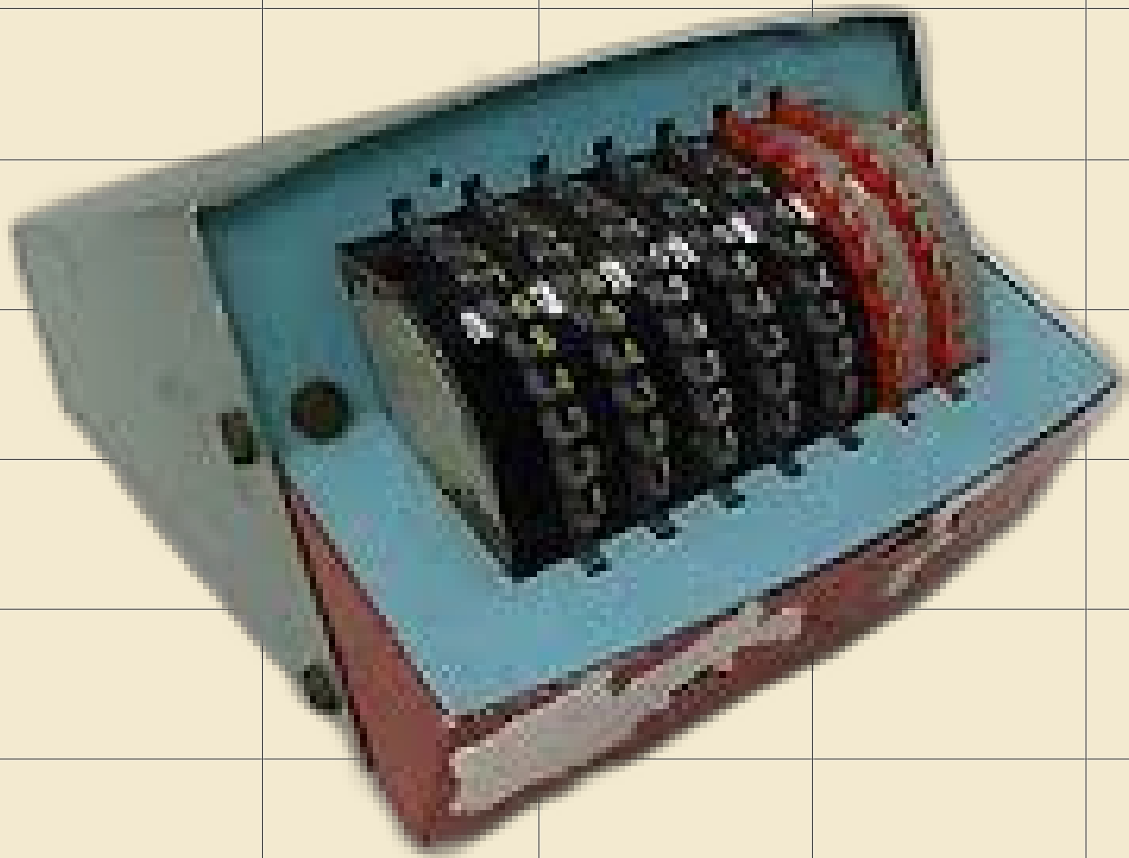


1947





La caroline



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