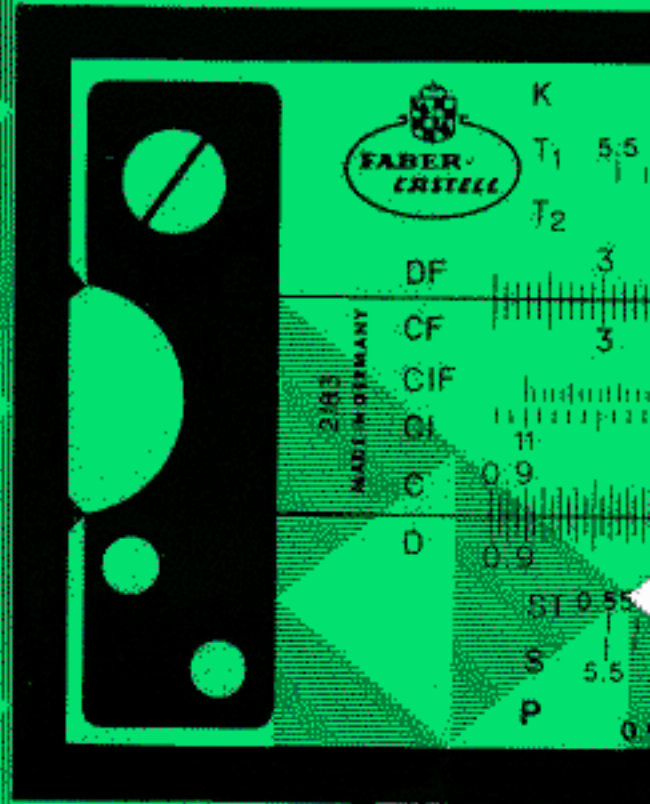
FABER-CASTELL



Materials of the CASTELL Slide Rules

CASTELL Slide Rules made of Geroplast

Geroplast is a synthetic material of highest quality, developed in many years of scientific research.
The Geroplast slide rules are moulded under high pressure. During this process the thread-like molecular chains in the substance are coordinated and tensions are thus eliminated.
The slide rule is practically unbreakable and highly elastic.
Geroplast is indifferent to tropical conditions and will maintain dimensional accuracy up to 70° C. It is non-inflammable. The smooth, white surface is hard and not affected by sun-rays, humidity and most chemical substances.

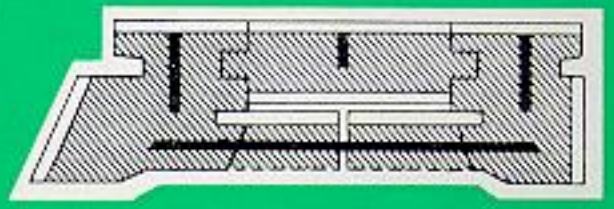
CASTELL Slide Rules made of Special Wood

The special wood used for Castell slide rules is prepared by a unique process developed in our works.

The slide rules are conspicuous for extraordinary hardness, smooth surface, excellent slide and cursor movement and long durability.

Climatic changes cannot affect the wood.

The metal inserts imbedded in the wood give added stability and elasticity.



Advantages of all CASTELL Slide Rules

Both materials bestow on the CASTELL slide rules an equally high degree of workmanship, precision and durability. The purchaser is free to make his choice between the two types, according to his personal taste.

The scales are finely engraved and filled with a special colouring agent which will neither wear out nor fade.

All CASTELL Slide Rules are supplied complete in a durable practical case, with instruction booklet.

Illustrations and descriptions in this booklet are not binding because our CASTELL slide rules are continuously adapted to the latest requirements of technical progress.

CASTELL Slide Rules for the various Professions

Profession	System of Scales	Page	Special Wood Slide Rules Scale Length		Geroplast Slide Rules Scale Length				Demonstration Slide Rules	
			10"	20"	10"	10" with Addiator	5" Pocket	5" Pocket with Add.	40"	60"
Engineers and Technicians in all fields of work	Duplex	6, 7, 8			2/82		62/82		334/82	
	Novo-Duplex	4, 5, 9			2/83		62/83		334/83	
	Darmstadt	10, 11	1/54	4/54	111/54	111/54 A	67/54 b	67/54 R	334/54	315/54
Construction Engineers, Mechanical Engineers, Electricians	Rietz	12, 13	1/87	4/87	111/87	111/87 A	67/87	67/87 R	334/87	315/87
	Engineers Log Log	16	1/92							
	Electro	14, 15	1/98	4/98	111/98		67/98 b	67/98 R	334/98	
Architects, Builders	Basic	13					67/39		334/60	
	Basic Trig	12, 13	1/60				67/91			
Mathematicians, Physicists	Mathema	28, 29			2/84					
Businessmen, Financial Administrators	Business	18, 19	1/22	4/22	111/22	111/22 A	67/22	67/22 R	334/22	315/22
	Super Business	17	1/28							
Surveyors	Stadia	30		4/38	111/38		67/38 b			
Factory Time Computers Technicians in Metal Industries	Machine Time	31			111/48					
Steel Concrete Builders	Steel Concrete	34	3/11							
Printing Trades, Paper Mills	Demegraph	32, 33			111/66					
Textile Engineers	Textile	27			57/74					
Students	Students Duplo	20			52/82				334/52	
	Students Columbus	21			57/86				334/86	
	Students Rietz	22			57/87				334/87	315/87
	Students Advanced Rietz	23			57/88				334/88	
	Students Super Log Log	24			57/89				334/89	315/89
	Students Log Log	25			57/92					
	Students Business	26			57/22				334/22	315/22

4

CASTELL double-faced Slide Rule
NOVO-DUPLEX

No. 2/83 Geroplast Scales: 10" = 25 cm
with additional Constant Table, with millimetre and inch scales along the edges

FUNCTIONS

K Fixed cube scale for calculation of cubes and cube roots

T_1 1st Tan-Scale from 5.5° to 45°

T_2 2nd Tan-Scale from 45° to 84.5° for trigonometrical calculations

DF Fixed basic scale displaced by π

CF Movable basic scale displaced by π for compound calculation with the value π

CIF Movable reciprocal basic scale to CF and DF

CI Movable reciprocal basic scale for simple and compound multiplication and division in conjunction with scales C and D

C Movable basic scale

D Fixed basic scale for multiplication, division and calculation of ratios

ST Sine-tangent scale for small angles for trigonometrical calculations from 0.55° to 6°

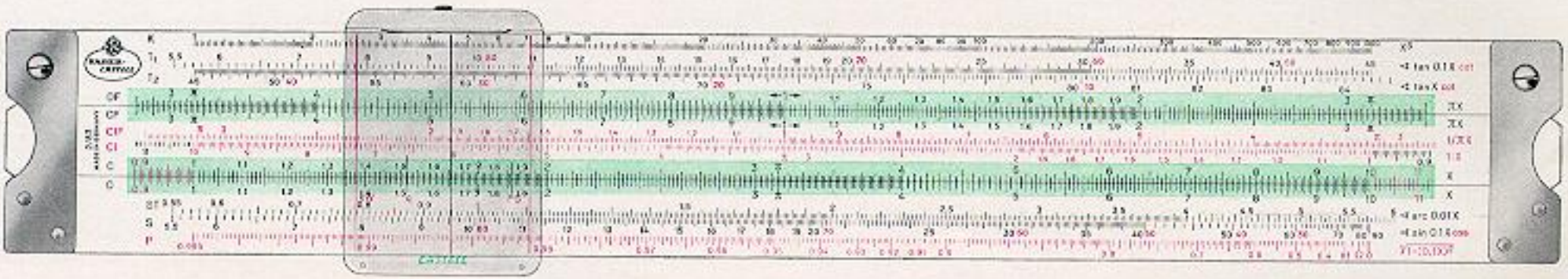
S Sine scale for trigonometrical calculations from 5.5° to 90°

P Pythagorean scale, for solving the formula $y = \sqrt{1 - (0.1\,x)^2}$ in conjunction with the C and D scales, for vectorial calculations

PROFESSIONS

Engineers in all fields of work
Physicists
Mathematicians
H. F. and Telecommunications Engineers
Hydraulic Engineers
Chemists
Technicians
Polytechnic Students
Engineering Students

Front of Slide Rule



The root scales W_1, W_1', W_2 and W_2' are an important feature; these enable accurate calculations to be carried out to 4 decimal places, as the graduations are broken off at $\sqrt{10} = 3.16$ and are distributed over two pairs of scales. This is the first double slide rule to be produced in a handy form, providing for the most important types of calculation and giving the increased degree of accuracy of a 20" scale length.

FUNCTIONS

LL_{01} LL_{02} LL_{03} Exponential scales for negative exponents for calculation of exponential functions with negative exponents and natural logarithms from 0.00002 to 0.9905. Formation of hyperbolic functions

W_2 W_2' Root scales from 3.16 to 10 for multiplication and division, and for forming tables with increased accuracy

L Logarithmic scale for calculation of mantissae and antilogarithms

C Movable basic scale for calculation of squares and square roots in conjunction with the root scales, or for exponential calculations in conjunction with the LL scales

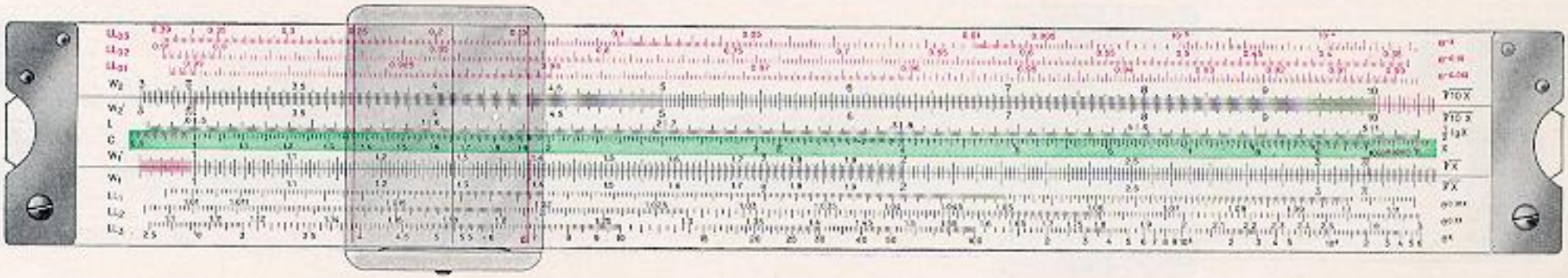
W_1 W_1' Root scales from 1 to 3.16 for multiplication and division, and for forming tables with increased accuracy

LL_1 LL_2 LL_3 Exponential scales for positive exponents for calculation of exponential functions with positive exponents and natural logarithms from 1.0095 to 60 000. Formation of hyperbolic functions.

Angle Scales 360 ° (decimal)

Instructions in:
English, German, French, Dutch, Portuguese, Spanish, Swedish

Back of Slide Rule



CASTELL double faced Slide Rule
DUPLEX

No. 2/82 Geroplast Scales: 10" = 25 cm
with separate Constant Table, with millimetre and inch scales along the edges

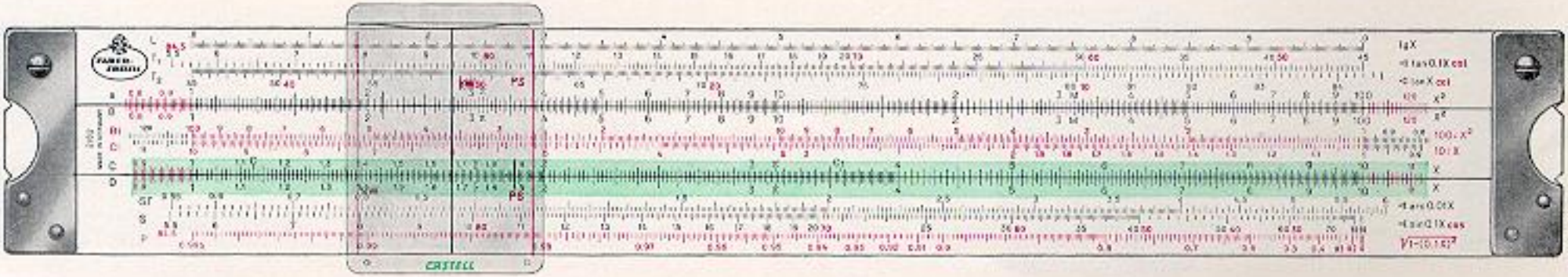
FUNCTIONS

- L — Logarithmic scale for calculation of mantissae and antilogarithms
- T_1 — 1st Tan-Scale from 5.5° to 45°
- T_2 — 2nd Tan-Scale from 45° to 84.5° for trigonometrical calculations
- A — Fixed quadratic scale
- B — Movable quadratic scale for calculation of squares and square roots
- BI — Movable reciprocal quadratic scale
- CI — Movable reciprocal basic scale for simple and compound multiplication and division in conjunction with scales C and D
- C — Movable basic scale
- D — Fixed basic scale for multiplication, division and calculation of ratios
- P — Pythagorean scale for solving of formula $y = \sqrt{1 - (0.1\ x)^2}$, in conjunction with the C and D scales for vectorial calculations
- S — Sine scale from 5.5° to 90° for trigonometrical calculations
- ST — Sine-tangent scale for small angles from 0.55° to 6° for trigonometrical calculations

PROFESSIONS

Engineers in all fields of work
Physicists
Mathematicians
H. F. and Telecommunications Engineers
Hydraulic Engineers
Chemists
Technicians
Polytechnic Students
Engineering Students

Front of Slide Rule



FUNCTIONS

LL_{01} LL_{02} LL_{03} Exponential scales for negative exponents for calculation of exponential functions with negative exponents and natural logarithms from 0.00002 to 0.9905. Formation of hyperbolic functions.

K Fixed cube scale

K' Movable cube scale for calculation of cubes and cube roots (K' for further calculation, in the case of compound calculations).

C Movable basic scale

CIF Movable reciprocal basic scale to CF and DF

CF Movable basic scale displaced by π

DF Fixed basic scale displaced by π for compound calculation with the value π

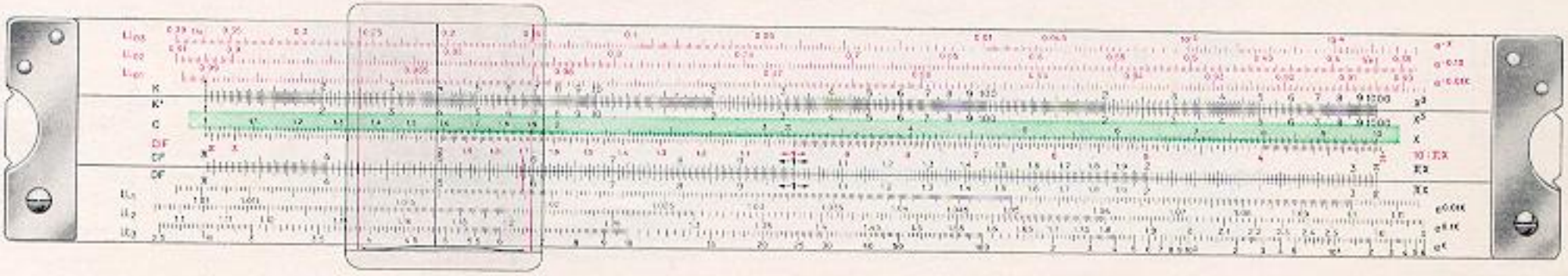
LL_1 LL_2 LL_3 Exponential scales for positive exponents for calculation of exponential functions with positive exponents and natural logarithms from 1.0095 to 60 000. Formation of hyperbolic functions

Angle Scales 360 ° (decimal)

Instructions in:

English, German, French, Dutch
Italian, Norwegian, Portuguese,
Spanish, Swedish

Back of Slide Rule



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CASTELL Pocket Slide Rule
DUPLEX

No. 62/82 Geroplast

Scales: 5'' = 12,5 cm

FUNCTIONS

L	Logarithmic Scale
T_1	1st Tan-Scale from 5.5° to 45°
T_2	2nd Tan-Scale from 45° to 84.5°
A	Fixed quadratic scale
B	Movable quadratic scale
BI	Movable reciprocal quadratic scale
CI	Movable reciprocal basic scale
C	Movable basic scale
D	Fixed basic scale
P	Pythagorean scale
S	Sine scale from 5.5° to 90°
ST	Sine-tangent scale for small angles from 0.55° to 6° for trigonometrical calculations

BACK OF RULE

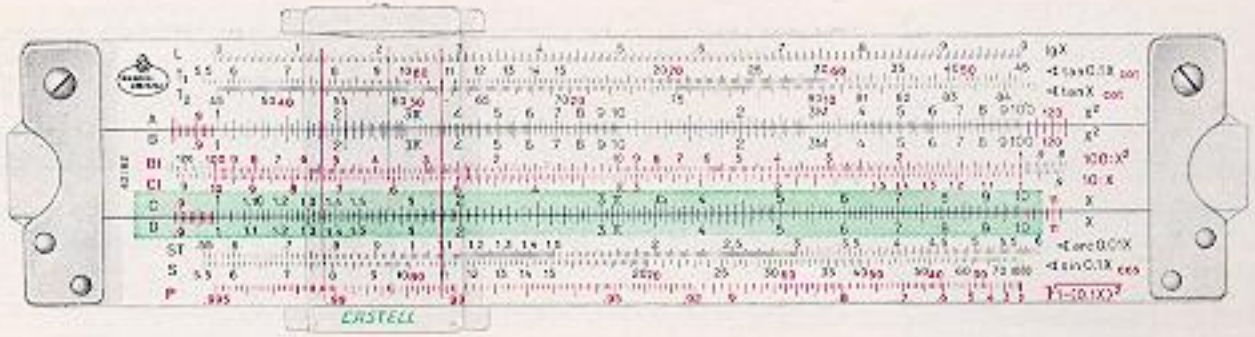
LL_{01}, LL_{02}, LL_{03}	Exponential scales for negative exponents
K	Fixed cube scale
K'	Movable cube scale
C	Movable basic scale
CIF	Movable reciprocal basic scale to CF and DF
CF	Movable basic scale displaced by π
DF	Fixed basic scale displaced by π
LL_1, LL_2, LL_3	Exponential scales for positive exponents

PROFESSIONS

Engineers in all fields of work
Physicists
Mathematicians
H. F. and Telecommunications Engineers
Hydraulic Engineers
Chemists
Technicians
Polytechnic Students
Engineering Students

Angle Scales 360 ° (decimal)

Instructions in:
English, German, French, Dutch, Italian, Norwegian, Portuguese, Spanish, Swedish.



The root scales W_1, W_1', W_2 and W_2' are an important innovation: the graduations are broken off at $\sqrt{10} = 3.16$ and are distributed over two pairs of scales. This is the first duplex pocket slide rule providing for the most important types of calculation and giving the increased degree of accuracy of a 10" scale length.

CASTELL Pocket Slide Rule
NOVO-DUPLEX

No. 62/83 Geroplast
Scales: 5" = 12.5 cm

FUNCTIONS

K	Fixed cube scale
T_1	1st Tan-Scale from 5.5° to 45°
T_2	2nd Tan-Scale from 45° to 84.5°
CF	Movable basic scale displaced by π
DF	Fixed basic scale displaced by π
CIF	Movable reciprocal basic scale to CF and DF
CI	Movable reciprocal basic scale to C and D
C	Movable basic scale
D	Fixed basic scale
ST	Sine-tangent scale for small angles
S	Sine scale from 5.5° to 90°
P	Pythagorean scale

BACK OF RULE

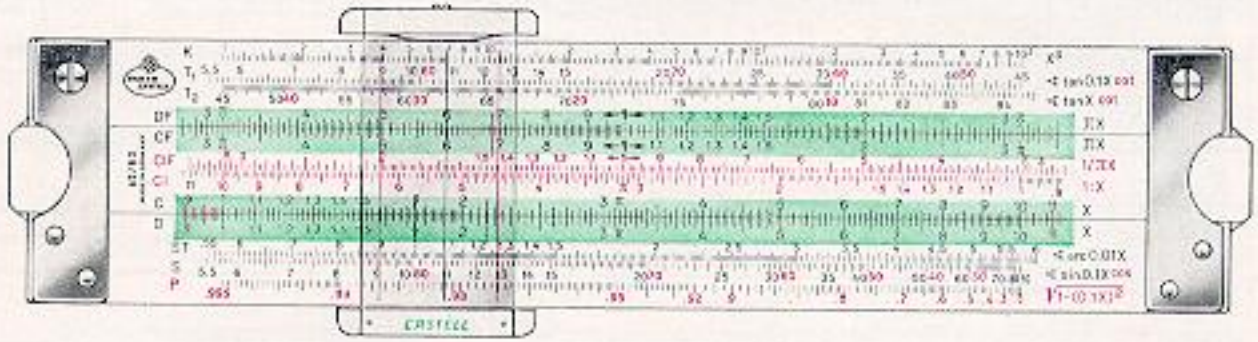
LL_{01}, LL_{02}, LL_{03}	Exponential scales for negative exponents
W_2, W_2'	Root scales from 3 to 10
L	Logarithmic scale
C	Movable basic scale
W_1, W_1'	Root scales from 1 to 3.3
LL_1, LL_2, LL_3	Exponential scales for positive exponents

PROFESSIONS

Engineers in all fields of work
Physicists
Mathematicians
H. F. and Telecommunications Engineers
Hydraulic Engineers
Chemists
Technicians
Polytechnic Students
Engineering Students

Angle Scales 360° (decimal)

Instructions in:
English, German, French, Dutch, Portuguese, Spanish, Swedish.



CASTELL DARMSTADT

No. 111/54	Geroplast	Scales: 10" = 25 cm
No. 1/54	Special Wood	Scales: 10" = 25 cm
No. 4/54	Special Wood	Scales: 20" = 50 cm
No. 111/54 A	Geroplast with Addiator Calculator	Scales: 10" = 25 cm

FUNCTIONS

Inch scale

K — Fixed cube scale for calculation of cubes and cube roots

A — Fixed quadratic scale
B — Movable quadratic scale
} For calculating squares and square roots

CI — Movable reciprocal basic scale for simple and compound multiplication and division, in conjunction with D and C

C — Movable basic scale
D — Fixed basic scale
} For multiplication, division and calculation of ratios

P — Pythagorean scale for solving of formula $y = \sqrt{1 - x^2}$, in conjunction with the C and D scales for vectorial calculations

S — Sine scale

T — Tangent scale for trigonometrical calculations

L — Logarithmic scale for calculation of mantissae and antilogarithms

BACK OF SLIDE

LL_1, LL_2, LL_3 — Exponential scales from 1.01 - 10^5 for calculation of "e" functions and also for powers with whole and fractional exponents, also for formation of hyperbolic functions

PROFESSIONS

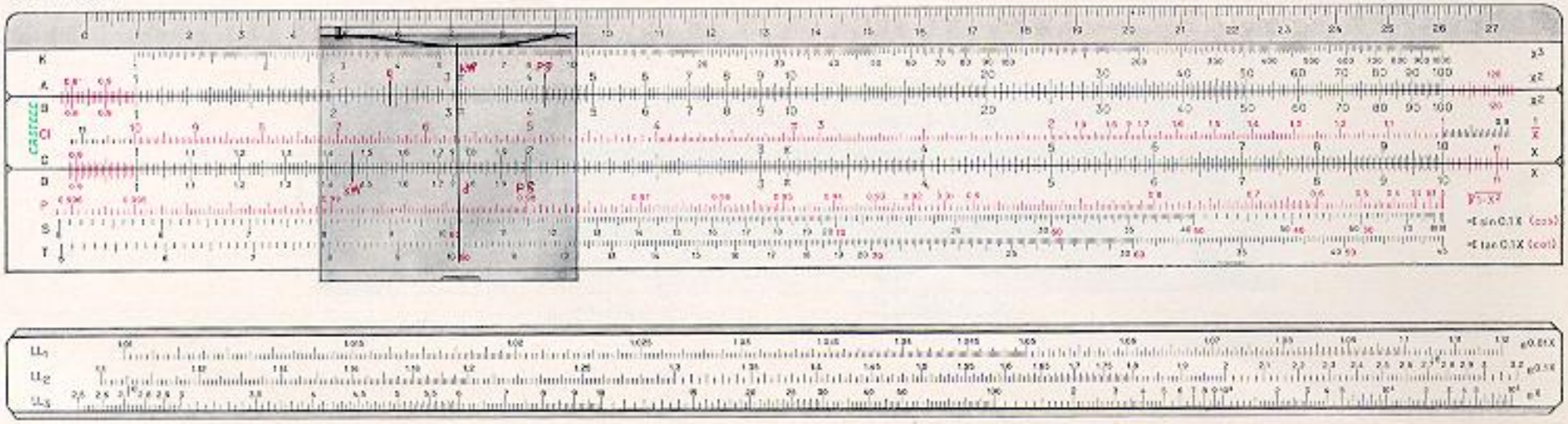
Electrical and Mechanical Engineers
Physicists
Chemists
Mathematicians
Technicians dealing with High Frequency
Scientific Workers
Students

Angle scales 360° (decimal)

111/54, 1/54, 4/54 also with 400g (decimal)

Instructions in:
English, German, French, Dutch, Italian, Norwegian, Portuguese, Spanish, Swedish.

No. 111/54



No. 67/54 b Geroplast — Scales: 5" = 12.5 cm
No. 67/54 R Geroplast with Addiator Calculator — Scales: 5" = 12.5 cm

CASTELL Pocket Slide Rule
DARMSTADT

FUNCTIONS

Inch scale
- L Logarithmic scale
- K Fixed cube scale
- A Fixed quadratic scale
- B Movable quadratic scale
- CI Movable reciprocal basic scale to C and D
- C Movable basic scale
- D Fixed basic scale
- P Pythagorean scale
- S Sine scale
- T Tangent scale for trigonometrical calculations

BACK OF SLIDE

- LL_1 Exponential scales
- LL_2 from 1.01 to 10^5
- LL_3 for calculation of "e" functions and also of powers with whole and fractional exponents, also for formation of hyperbolic functions

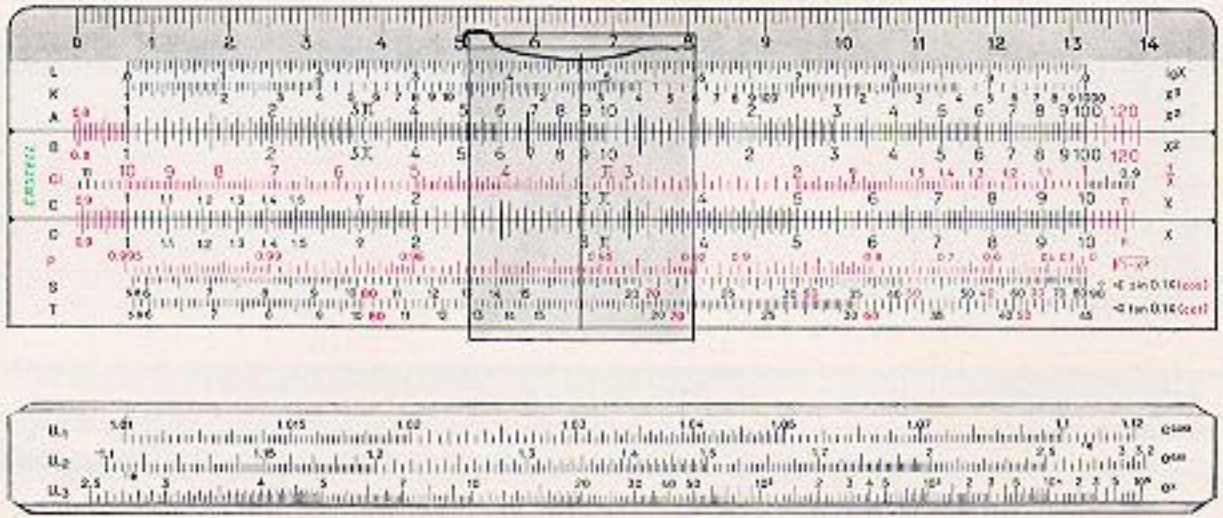
PROFESSIONS

Electrical and Mechanical Engineers
Physicists
Chemists
Mathematicians
Technicians dealing with High Frequency
Scientific Workers
Students

Angle Scales 360° (decimal)

Instructions in:
English, German, French, Dutch, Italian, Norwegian, Portuguese, Spanish, Swedish.

No. 67/54 b



CASTELL RIETZ
CASTELL BASIC-TRIG

No. 111/87	Geroplast	Scales: 10" = 25 cm
No. 1/87	Special Wood	Scales: 10" = 25 cm
No. 4/87	Special Wood	Scales: 20" = 50 cm
No. 111/87 A	Geroplast with Addiator	Scales: 10" = 25 cm
No. 1/60	Special Wood	Scales: 10" = 25 cm

FUNCTIONS

Inch scale

K — Fixed cube scale for calculation of cubes and cube roots

A, B — Quadratic scales for calculation of squares and square roots

CI — Movable reciprocal basic scale for simple and compound multiplication and division, in conjunction with scales C and D

C, D — Basic scales for multiplication, division and calculation of ratios

L — Logarithmic scale for calculation of mantissae and antilogarithms

BACK OF SLIDE

S — Sine scale
T — Tangent scale
ST — Sine-tangent scale for small arcs
} for trigonometrical calculations

Also available as Basic-trig model CASTELL No. 1/60, with the same scales as the Rietz No. 1/87 but without the cube scale K. The log scale L is on the reverse instead of the ST scale and the cursor has only one line.

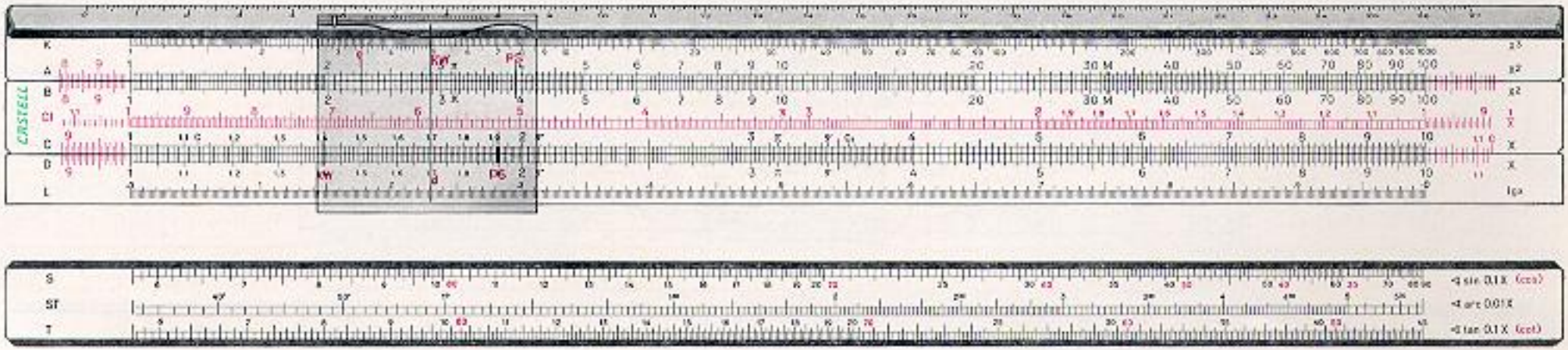
PROFESSIONS

Mechanical Engineers
Building Engineers
Architects
Mechanical Technicians
Draughtsmen
Works Managers
Timber Merchants, Foresters
Technical Students and Trainees

Angle Scales 360° (sexagesimal)
1/87 and 111/87 also 400g (decimal)

Instructions in:
English, German, French, Dutch, Italian, Norwegian, Polish, Portuguese, Spanish, Swedish.

No. 1/87



No. 67/87	Geroplast	Scales: 5" = 12.5 cm
No. 67/87 R	Geroplast with Addiator Calculator	Scales: 5" = 12.5 cm
No. 67/39	Geroplast	Scales: 5" = 12.5 cm
No. 67/91	Geroplast	Scales: 5" = 12.5 cm

CASTELL Pocket Slide Rules
RIETZ/BASIC/BASIC-TRIG

FUNCTIONS

Inch scale
- K — Fixed cube scale
- A, B — Quadratic scales
- CI — Movable reciprocal basic scale to C and D
- C, D — Basic graduations
- L — Logarithmic scale

BACK OF SLIDE

- S — Sine scale
- T — Tangent scale
- ST — Sine-tangent scale for small arcs

(S, T, ST: for trigonometrical calculations)

CASTELL No. 67/87 R "Rietz" with trigonometric scales S, ST T on lower body

CASTELL No. 67/39 "BASIC" has only the 4 main scales A, B, C, D and an inch scale on the bevelled edge.

CASTELL No. 67/91 "BASIC-TRIG" has been provided with 3 additional scales on the back of the slide, viz.: trigonometrical scales S and T, and logarithmic scale L.

PROFESSIONS

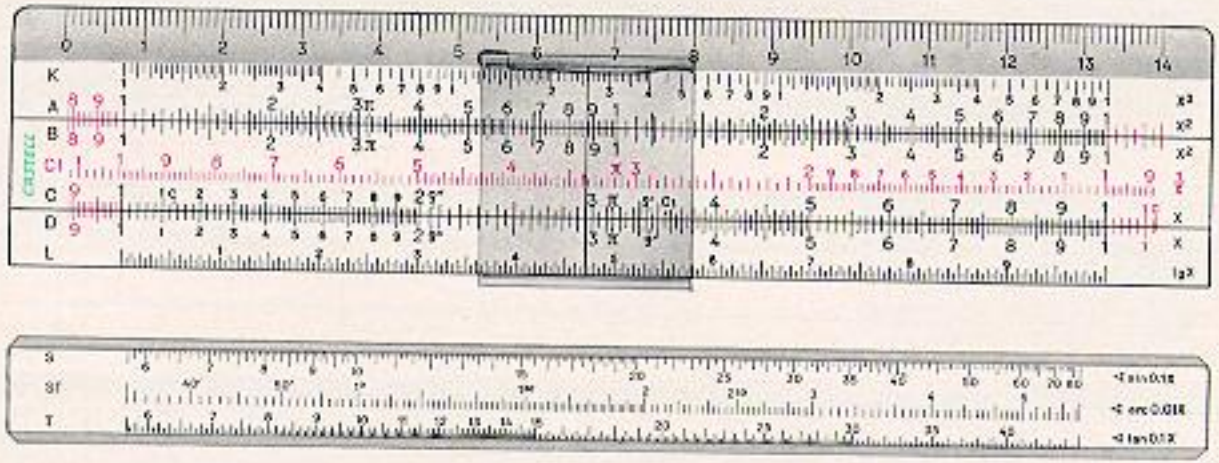
Mechanical Engineers
Building Engineers
Architects
Mechanical Technicians
Draughtsmen
Works Managers
Timber Merchants, Foresters
Technical Students and Trainees

Angle Scales 360° (sexagesimal)

Instructions in:

English, German, French, Dutch, Italian, Norwegian, Portuguese, Spanish, Swedish.

No. 67/87



CASTELL ELECTRO

No. 111/98	Geroplast	Scales: 10" = 25 cm
No. 1/98	Special Wood*	Scales: 10" = 25 cm
No. 4/98	Special Wood*	Scales: 20" = 50 cm

* with scales W and V on the stock below the slide

FUNCTIONS

Inch scale

A, B — Quadratic scales for calculation of squares and square roots

CI — Movable reciprocal basic scale for simple and compound multiplication and division in conjunction with scales C and D

C, D — Basic scales for multiplication, division and calculation of ratios

LL_2 / LL_3 — Log-Log or exponential scales from 1.1 to 100.000 for calculation of powers with whole or fractional exponents and also for formation of hyperbolic functions

W — Dynamo efficiency scale for determination of efficiency of dynamos and motors

V — Voltage-drop scale for determination of voltage-drop in electric circuits

K — Cube scale for calculation of cubes and cube roots

BACK OF SLIDE

S — Sine scale
L — Logarithmic scale
T — Tangent scale
} for trigonometrical calculations

PROFESSIONS

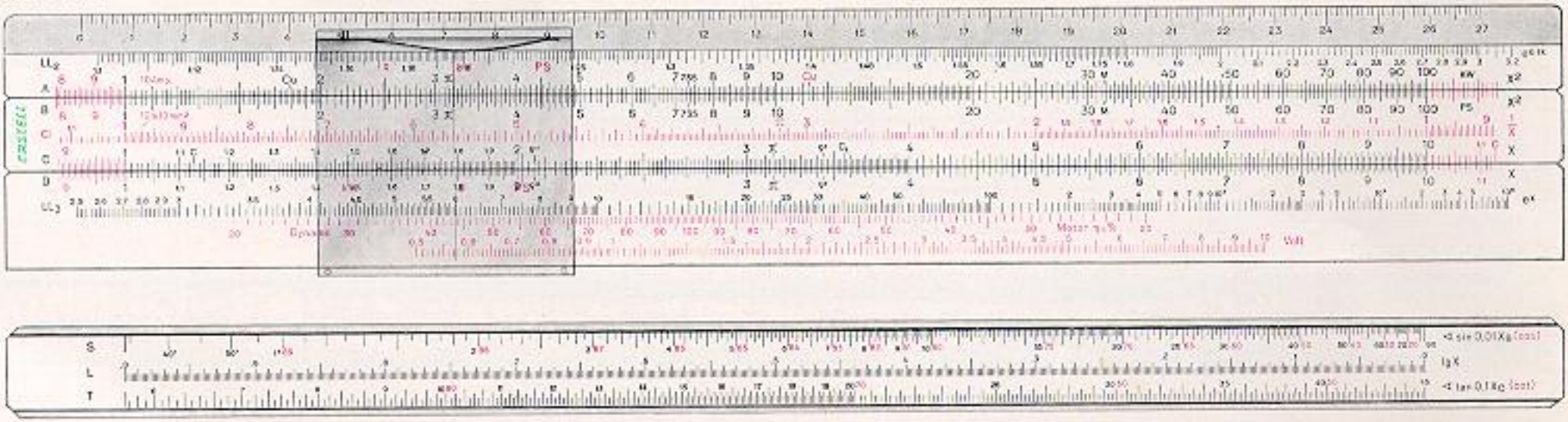
Electrical Engineers
Electrical Technicians
Works Managers in the Electrical Industry
Electrical Engineering Students and Trainees
Electricians

Angle Scales 360° (sexagesimal)

Instructions in:

English, German, French, Dutch, Italian, Norwegian, Polish, Portuguese, Spanish, Swedish.

No. 111/98



No. 67/98 b Geroplast — Scales: 5" = 12.5 cm
No. 67/98 R Geroplast with Addiator Calculator — Scales: 5" = 12.5 cm

CASTELL Pocket Slide Rule
ELECTRO

FUNCTIONS

Inch scale

LL_2 Log-Log or exponential scale from 1.1 to 3.2

A, B Quadratic scales for calculation of square roots

CI Movable reciprocal basic scale for simple and compound multiplication and division, in conjunction with C and D

C, D Basic graduations for multiplication, division and calculation of ratios

LL_3 Log-Log or exponential scale from 2.5 to 100.000

W Dynamo efficiency scale for determination of efficiency of dynamos and motors

V Voltage-drop scale for determination of voltage-drop in electric circuits

BACK OF SLIDE

S Sine scale
L Logarithmic scale
T Tangent scale
} for trigonometrical calculations

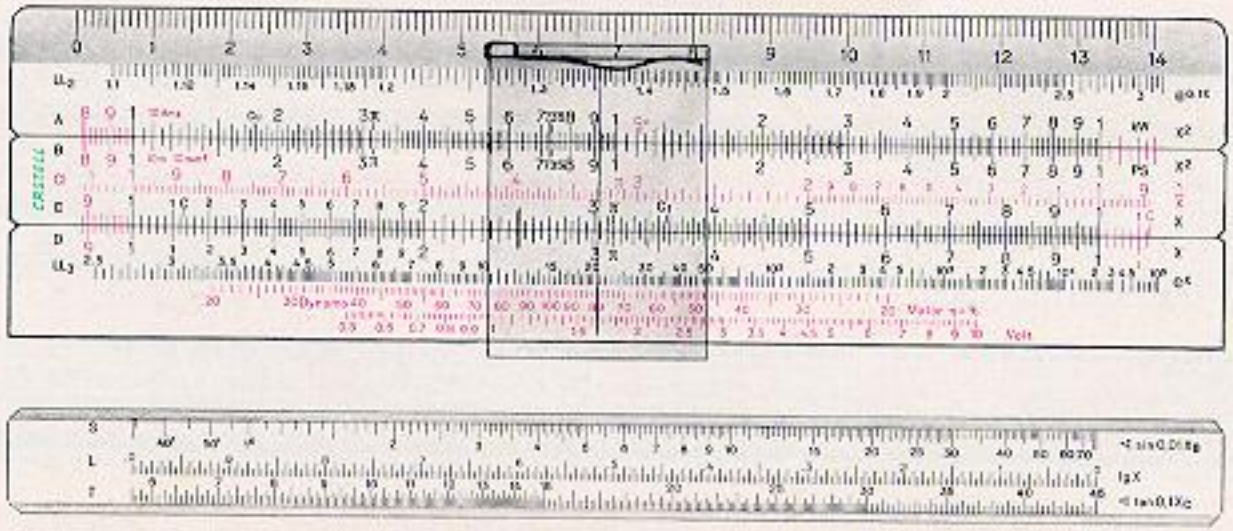
PROFESSIONS

Electrical Engineers
Electrical Technicians
Works Managers in the Electrical Industry
Electrical Engineering Trainees
Electricians

Angle Scales 360° (sexagesimal)

Instructions in:
English, German, French, Dutch, Italian, Norwegian, Spanish, Swedish.

No. 67/98 b



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CASTELL

ENGINEERS LOG LOG

No. 1/92 Special Wood

Scales: 10" = 25 cm

FUNCTIONS

A, B — Quadratic scales for calculation of squares and square roots

CI — Movable reciprocal basic scale for simple and compound multiplication and division in conjunction with scales C and D

C, D — Basic scales for multiplication, division and calculation of ratios

LL_2 / LL_3 — Log-Log or exponential scales from 1.1 to 100.000 for calculation of powers with whole or fractional exponents, and also for formation hyperbolic functions

K — Cube scale (on lower edge) for calculation of cubes and cube roots

BACK OF SLIDE

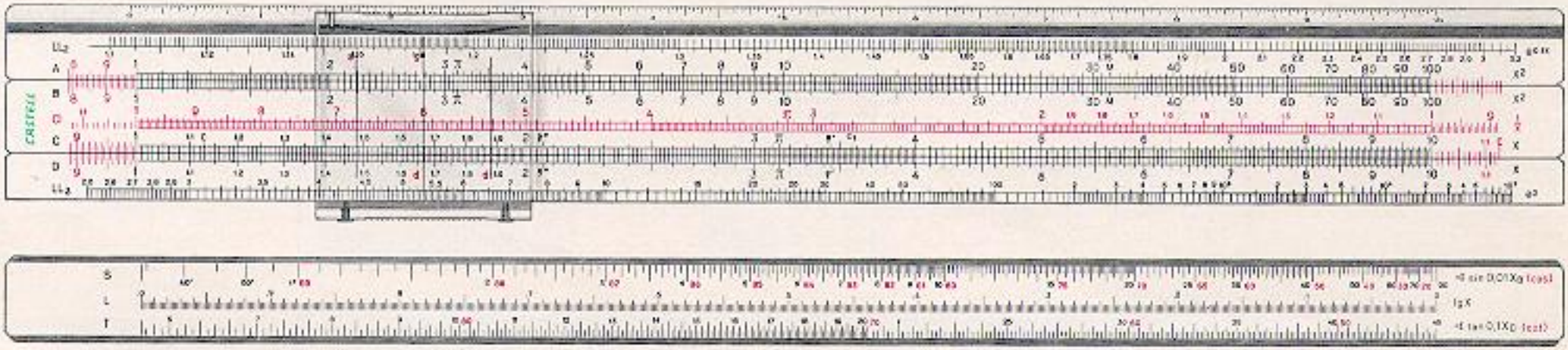
S — Sine scale
L — Logarithmic scale
T — Tangent scale
} for trigonometrical calculations

PROFESSIONS

Mechanical Engineers
Mathematicians
Physicists
Engineering Workers
Engineering Students and Trainees

Angle Scales 360° (sexagesimal)

Instructions in English only



No. 1/28 Special Wood Scales: 10" = 25 cm

CASTELL SUPER-BUSINESS

FUNCTIONS

Inch scale

L Logarithmic scale for calculation of mantissae and antilogarithms

K Cube scale for calculation of cubes and cube roots

DF, CF Upper basic scales on body and slide displaced by 3.6 complementary to D and C

CI Movable reciprocal basic scale for calculation of interest and for compound multiplication and division

D, C Lower basic scales on body and slide for multiplication, division and calculation of ratios

A Fixed quadratic scale for calculation of squares and square roots

Scale for conversion of s and d into decimals of English £

BACK OF SLIDE

LL_2 Exponential scales
LL_1 for compound interest calculations

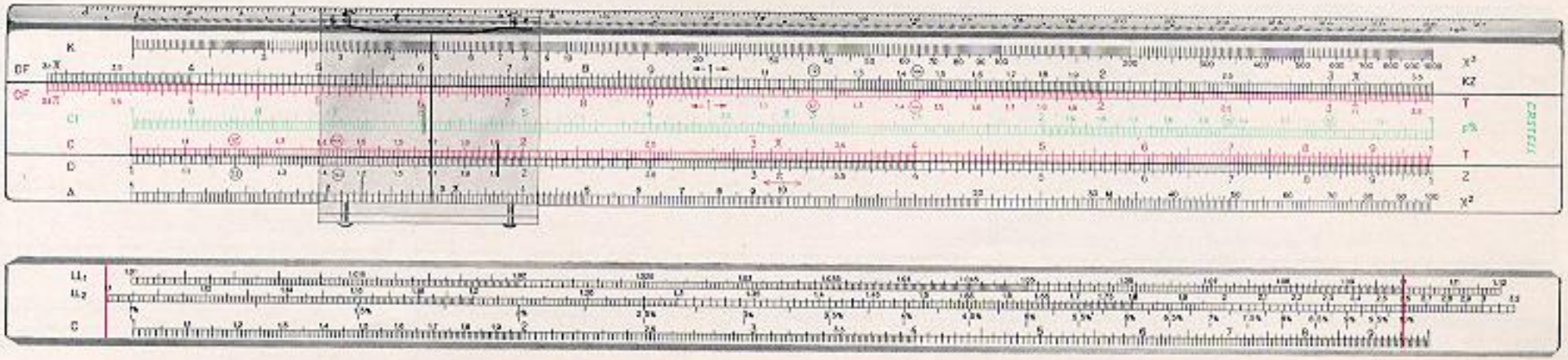
C Movable basic scale for calculation, multiplication and division of ratios

PROFESSIONS

Commercial Businessmen
Economists
Estimators
Technicians
Buyers

Without Angle Scales

Instructions in:
English, German, French



CASTELL BUSINESS

No. 111/22	Geroplast	Scales: 10" = 25 cm
No. 1/22	Special Wood	Scales: 10" = 25 cm
No. 4/22	Special Wood	Scales: 20" = 50 cm
No. 111/22 A	Geroplast with Addiator Calculator	Scales: 10" = 25 cm

FUNCTIONS

Inch scale

Determination marks for the most important international weights and measures

DF, CF Upper scales on body and slide displaced by 3.6, complementary to D and C

CI Movable reciprocal basic scale for simple and compound multiplication and division, in conjunction with D and C

C, D Lower scales on body and slide for multiplication, division and calculation of ratios

L Logarithmic scale

Scale for conversion of s and d into decimals of English £

BACK OF SLIDE

LL_1 LL_2 Exponential scales for compound interest calculations

C Movable basic scale for multiplication, division and calculation of ratios

PROFESSIONS

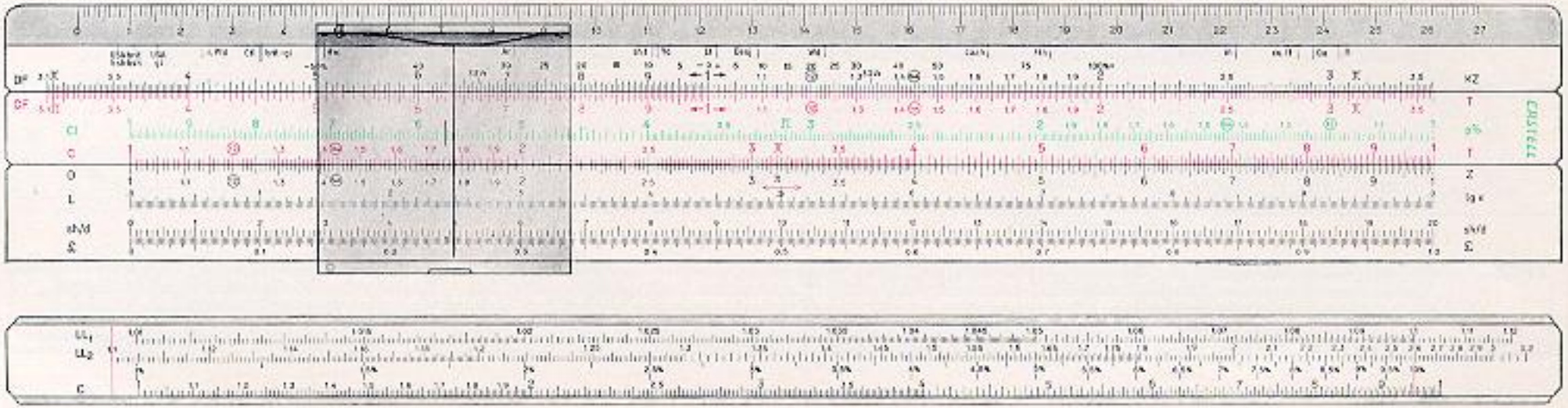
Commercial Businessmen
Financial Workers
Buyers
Costing Clerks
Officials

Without Angle Scales

Instructions in:

English, German, French, Finnish, Dutch, Italian, Norwegian, Portuguese, Spanish, Swedish.

No. 111/22



No. 67/22 Geroplast — Scales: 5" = 12.5 cm
No. 67/22 R Geroplast with Addiator Calculator — Scales: 5" = 12.5 cm

CASTELL Slide Rules
Pocket BUSINESS

FUNCTIONS

Inch scale

DF, CF Upper scales on body and slide displaced by 3.6, complementary to D and C

CI Movable reciprocal basic scale for simple and compound multiplication and division, in conjunction with scales C and D

C, D Lower scales on body and slide for multiplication, division and calculation of ratios

BACK OF SLIDE

Scales for conversion of s and d into decimals of English £ (with 67/22 R on front of rule).

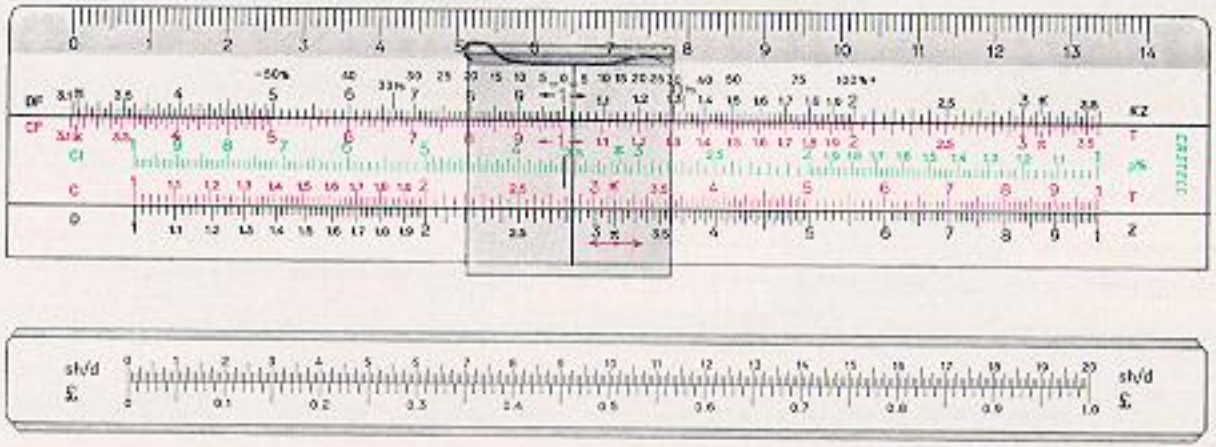
PROFESSIONS

Commercial Businessmen
Financial Workers
Buyers
Costing Clerks
Officials

Without Angle Scales

Instructions in:
English, German, French, Dutch, Italian, Norwegian, Portuguese, Spanish, Swedish.

No. 67/22



CASTELL double-faced slide rule
STUDENTS DUPLO

No. 52/82 Geroplast Scales: 10" = 25 cm
No. 334/52 Demonstration Slide Rule
(see also page 37) Scales: 40" = 100 cm

FUNCTIONS

L	Logarithmic scale
K	Fixed cube scale
A, B	Quadratic scales
CI	Movable reciprocal basic scale to C and D
C, D	Basic scales
LL_1, LL_2, LL_3	Exponential scales for positive exponents from 1.0095 to 60.000 for calculation of powers with whole or fractional exponents, also for formation of hyperbolic functions

BACK OF RULE

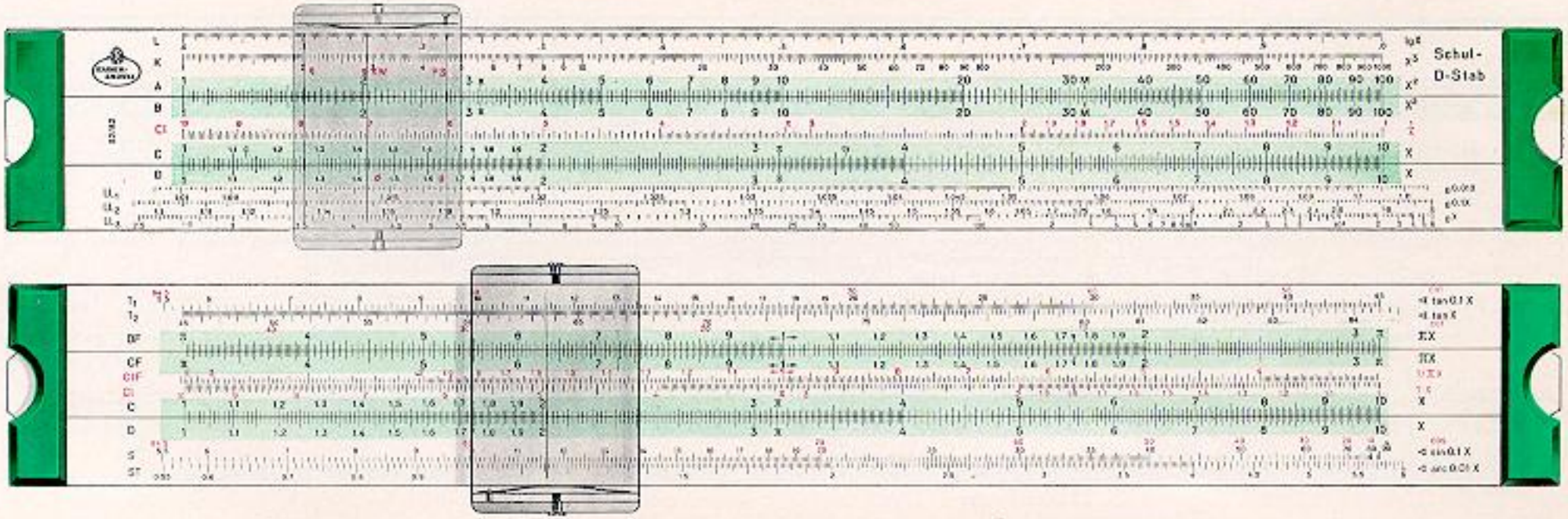
T_1	1st Tan-Scale from 5.5° to 45°
T_2	2nd Tan-Scale from 45° to 84.5°
DF, CF	Basic scales displaced by π
CIF	Movable reciprocal basic scale to CF and DF
CI	Movable reciprocal basic scale to C
C, D	Basic scales
S	Sin scale from 5.5° to 90°
ST	Sine-tangent scale for small angles from 0.55° to 6°

Cursor mark 36 for interest calculations and frequently required conversions in hydrodynamics and days into years, seconds into hours, m/sec. into km/h.

For Higher Modern Schools, Intermediate Schools, Technical Colleges, Training Establishments
The most advanced students rule for the highest level.
The first students model combining the π-displaced scales CF and DF with the 3 exponential scales LL_1, LL_2, LL_3 on one slide rule.

Angle Scales 360° (decimal)

Instructions in:
English, German, French, Dutch, Italian, Norwegian, Spanish, Swedish, Finnish, Portuguese.



No. 57/86 Geroplast — Scales: 10" = 25 cm
No. 334/86 Demonstration Slide Rule
(see also page 37) — Scales: 40" = 100 cm

CASTELL STUDENTS
COLUMBUS

FUNCTIONS

Inch scale

A	Fixed quadratic scale	Used in conjunction with C and D for calculation of squares and square roots
B	Movable quadratic scale	
C	Movable basic scale	For multiplication, division and formation of tables.
D	Fixed basic scale	

Diagrammatic illustrations on the back of the rule demonstrate the calculating and setting procedures.

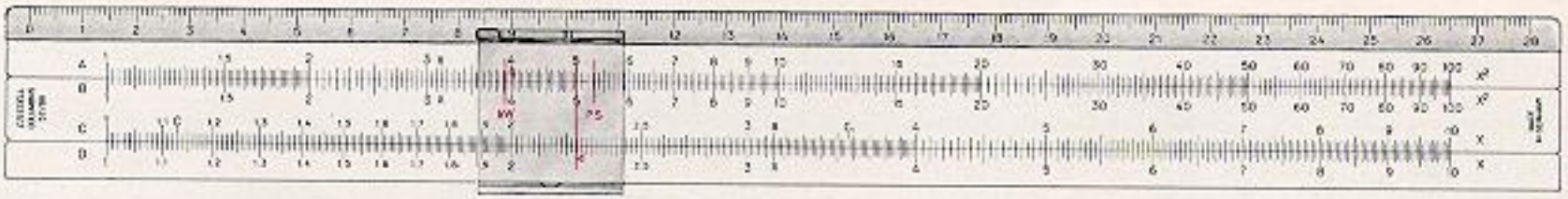
Each rule is supplied together with an instruction booklet, in the form of a slide rule primer, containing exercise diagrams.

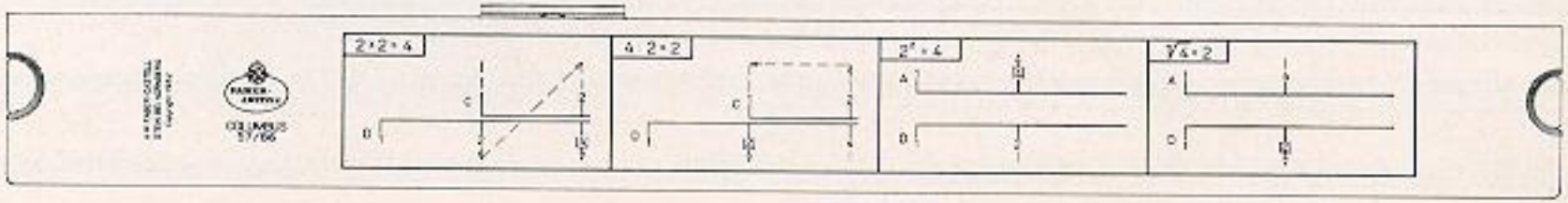
For the upper forms of primary schools

A slide rule with a simple scale system confined to the most common calculations (multiplication, division, squares and square roots, formation of tables) taught in primary schools.

Instructions in:

English, French, Finnish, Dutch, Italian, Portuguese, Spanish, Swedish.





CASTELL
STUDENTS RIETZ

No. 57/87 Geroplast Scales: 10" = 25 cm
No. 334/87 Demonstration Slide Rule Scales: 40" = 100 cm
No. 315/87 Demonstration Slide Rule (see also page 37) Scales: 60" = 150 cm

FUNCTIONS

Inch Scale

K Fixed cube scale for calculation of cubes and cube roots, also for fractional exponents $^2/_3$ and $^3/_2$

A Fixed quadratic scale
B Movable quadratic scale
} for calculation of squares and square roots

CI Movable reciprocal basic scale for simple and compound multiplication and division, in conjunction with scales C and D

C Movable basic scale
D Fixed basic scale
} for multiplication, division and calculation of ratios

L Logarithmic scale for calculation of mantissae and antilogarithms

BACK OF SLIDE

S Sine scale from 5°45' - 90°

ST Sine-tangent scale for small angles from 34' - 5°40'

T Tangent scale from 5°40' - 45° for trigonometrical calculations

Standard model for Higher Modern Schools, Higher Secondary Schools, Grammar Schools, Intermediate Schools, Training Colleges.

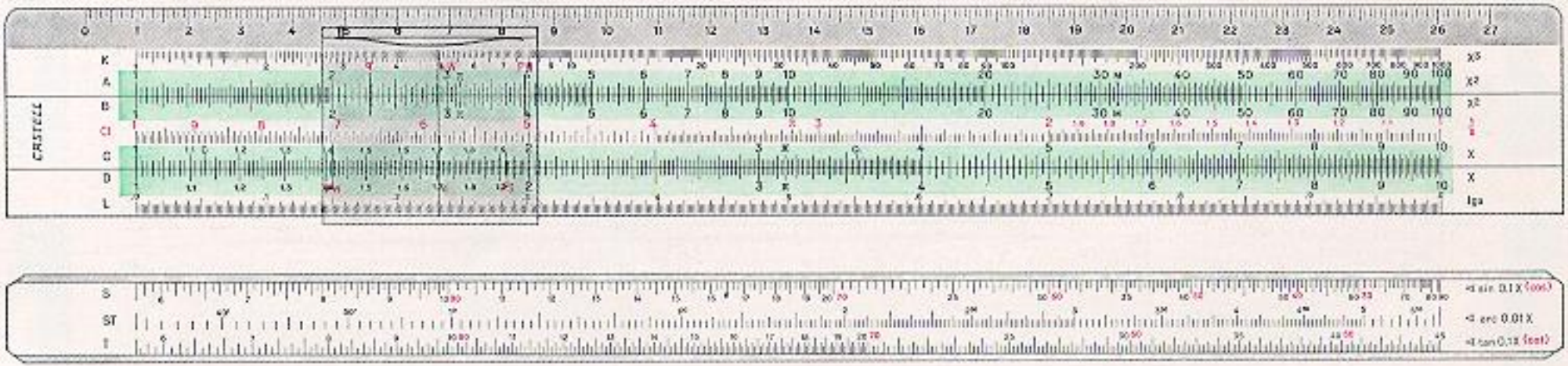
This model, popular for many years, is still preferred today on account of the favourable price and the simple scale arrangement.

The front of the slide rule bears only the scales for the basic calculations; the less frequently required trigonometrical scales are on the back of the rule.

Angle Scales 360° (sexagesimal)

Instructions in:

English, Dutch, German, French, Finnish, Italian, Norwegian, Portuguese, Spanish, Swedish.



CASTELL
STUDENTS ADVANCED RIETZ

FUNCTIONS

Inch Scale

K — Fixed cube scale for calculation of cubes and cube roots, also for fractional exponents $^2/_3$ and $^3/_2$

A — Fixed quadratic scale
B — Movable quadratic scale
} for calculation of squares and square roots

L — Logarithmic scale for calculation of mantissae and antilogarithms

CI — Movable reciprocal basic scale for simple and compound multiplication and division in conjunction with C and D

C — Movable basic scale
D — Fixed basic scale
} for multiplication, division and calculation of ratios

S — Sine scale from 5.5° to 90°

ST — Sine-tangent scale for small angles from 0.55° to 6°

T_1 — 1st Tan-Scale from 5.5° to 45°

T_2 — 2nd Tan-Scale from 45° to 84.5°

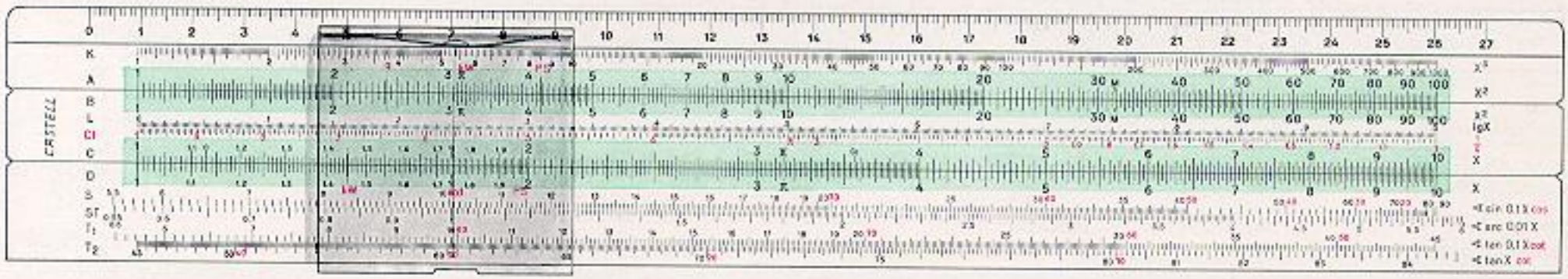
trigonometric scales in decimal subgraduation for calculation of angular functions and triangles

For Higher Modern Schools, Higher Secondary Schools, Grammar Schools, Intermediate Schools, Training Colleges

A very popular model in the class room. The graduations are arranged in the same way as in the case of the system "Rietz", but the trigonometrical scales are on the face of the slide rule and there is a supplementary tangent scale T_2 from 45° to 84.5°.

Angle Scales 360° (decimal)

Instructions in:
English, German, Finnish, French, Danish, Dutch, Norwegian, Spanish, Swedish.



CASTELL
STUDENTS SUPER LOG LOG

No. 57/89 Geroplast Scales: 10" = 25 cm
No. 334/89 Demonstration Model Scales: 40" = 100 cm
No. 315/89 Demonstration Model Scales: 60" = 150 cm
(see also page 37)

FUNCTIONS

Inch scale

K Fixed cube scale for calculation of cubes and cube roots, also for fractional exponents $^3/_3$ and $^3/_2$

A Fixed quadratic scale
B Movable quadratic scale
} for calculation of squares and square roots

L Logarithmic scale for calculation of mantissae and antilogarithms

CI Movable reciprocal basic scale for simple and compound multiplication and division, in conjunction with C and D

C Movable basic scale
D Fixed basic scale
} for multiplication, division and calculation of ratios

S Sine scale from 5.5° to 90°

ST Sine-tangent scale for small angles from 0.55° to 6°

T_1 1st Tan-scale from 5.5° to 45°

T_2 2nd Tan-scale from 45° to 84.5°

trigonometric scales in decimal subgraduation for calculation of angular functions and triangles

BACK OF THE SLIDE

LL_2
LL_3
Log-Log or exponential scales from 1.1 to 100.000 for calculation of powers with whole or fractional exponents, and also for formation of hyperbolic functions

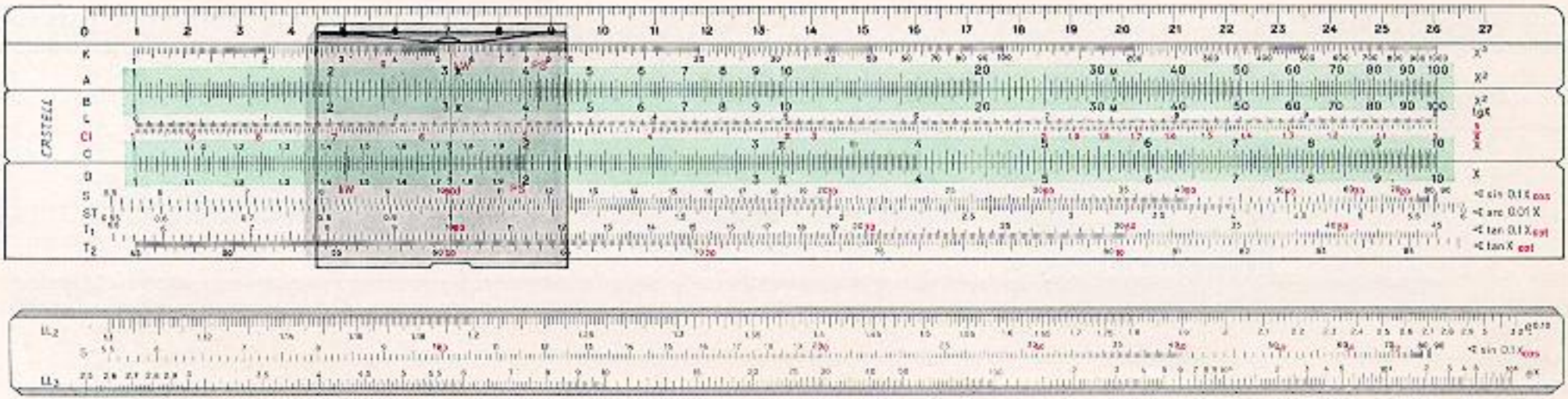
S Second Sine scale from 5.5° to 90°, in connection with S scale on the front for spherical trigonometry calculations

For Higher Modern Schools, Higher Secondary Schools, Grammar Schools, Intermediate Schools, Training Colleges.

This model offers yet a further advancement on the "Advanced Rietz". It has been provided with the following additional scales: An arc scale ST on the lower stock and two log log scales LL_2 and LL_3 on the back of the slide.

Angle Scales 360° (decimal)

Instructions in:
English, German, French, Dutch, Finnish, Norwegian, Spanish, Swedish.



CASTELL
STUDENTS LOG LOG

FUNCTIONS

Inch scale

A Fixed quadratic scale
B Movable quadratic scale
} for calculation of squares and square roots

CI Movable reciprocal basic scale for simple and compound multiplication and division, in conjunction with C and D

C Movable basic scale
D Fixed basic scale
} for multiplication, division and calculation of ratios

LL_2 Log-Log or exponential scales from
LL_3 1.1 to 100.000
for calculation of powers with whole or fractional exponents, and also for constructing hyperbolic functions

BACK OF THE SLIDE:

S Sine scale from 34' - 90°

T Tangent scale from 5°40' - 45°
trigonometric scales in sexagesimal subgraduation for calculation of angular functions and triangles

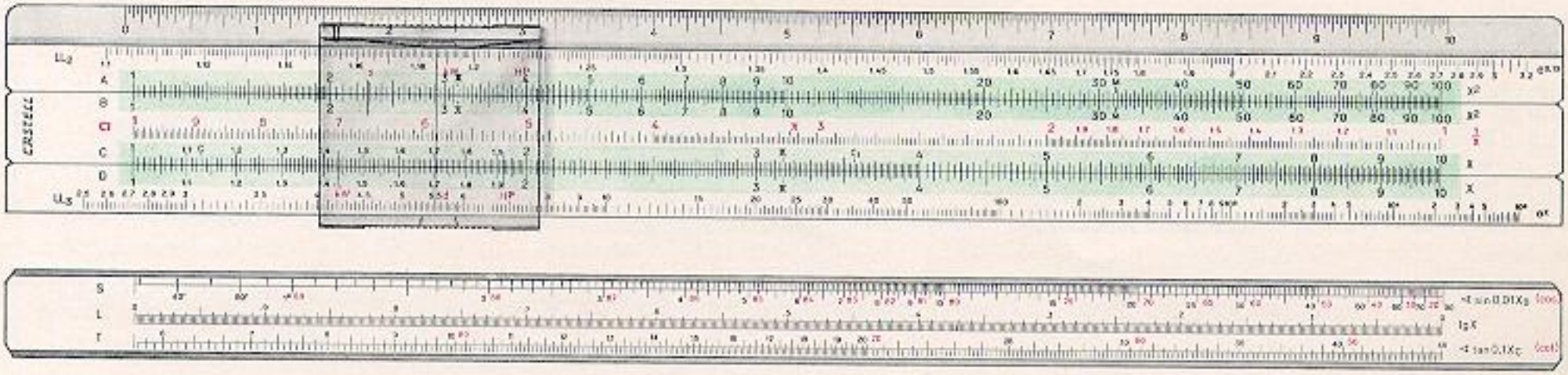
L Logarithmic scale
for calculation of mantissae and antilogarithms

For Higher Modern Schools, Higher Secondary Schools, Grammar Schools, Intermediate Schools, Training Colleges.

An approved model with the LL scales on the face of the slide rule. Thus working with the Log-Log Scales is possible without having to turn the slide — an advantage often preferred.

Angle Scales 360° (sexagesimal)

Instructions in English only.



CASTELL
STUDENTS BUSINESS

No. 57/22 Geroplast Scales: 10" = 25 cm
No. 334/22 Demonstration Slide Rule
Scales: 40" = 100 cm
No. 315/22 Demonstration Slide Rule
(see also page 37) Scales: 60" = 150 cm

FUNCTIONS

Inch scale

Special marks for conversion of British/US and metric weighs and measurements

DF Basic scales displaced by 3.6:
CF In conjunction with the Basic scales C and D, for the formation of tables, percentage additions and percentage rebates, cost computations (in which the computation factor can also be determined), compound calculations, multiplications and divisions, conversions of m/sec. into km/h and vice versa, etc.

CI Movable reciprocal basic scale for simple and compound multiplication and division, exchange calculations, in conjunction with C and D

C, D Basic scales for multiplication, division and calculation of ratios

L Logarithmic scale for common logarithms

BACK OF THE SLIDE:

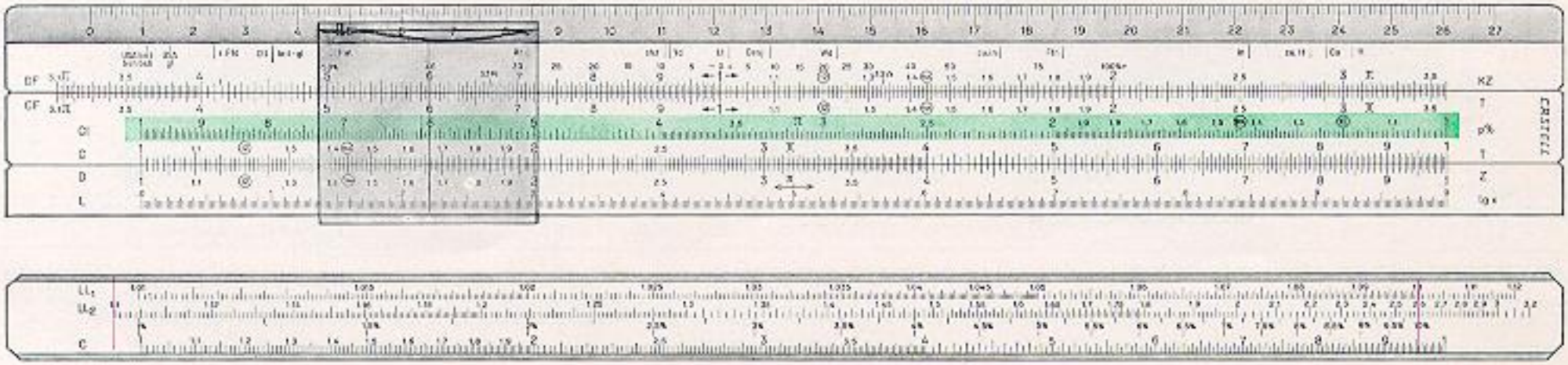
LL_1 Exponential scales for compound
LL_2 interest calculations

C Movable basic scale for multiplication, division and calculation of ratios in conjunction with LL_1 and LL_2

For commercial students, higher economics, commercial subjects. Use of the slide rule is becoming increasingly popular in the world or commerce. The CF and DF scales, displaced by 3.6, enable interest to be calculated and are particularly suitable for surcharge or discount percentages, cost computations and currency exchange. For these purpose the slide rule proves superior to many other devices.

Instructions in:

English, German, French, Dutch, Italian, Norwegian, Portuguese, Spanish, Swedish



No. 57/74 Geroplast
System Schirdewan Scales: 10" = 25 cm

CASTELL TEXTILE

FUNCTIONS

Inch scale

LL Exponential scale
for calculation of exponential functions and natural logarithms from 1.1 to 10^5

A Fixed quadratic scale

B Movable quadratic scale
for calculation of squares and square roots

BI Movable reciprocal quadratic scale to B for simple and compound multiplication and division in conjunction with A and B

C Movable basic scale

D Fixed basic scale
for multiplication, division and calculation of ratios

Z_1 (Front of Rule)
Z_2 (Back of Slide)
Z_3 (Back of Slide)
BI (Back of Slide)
} Scales for determining yarn sizes for 2 (or more) separate threads

Movable reciprocal quadratic scale

The individual scales and also the cursor are marked for the various factors involved in the conversion of yarn sizes, thread thickness, lengths, weights, etc.

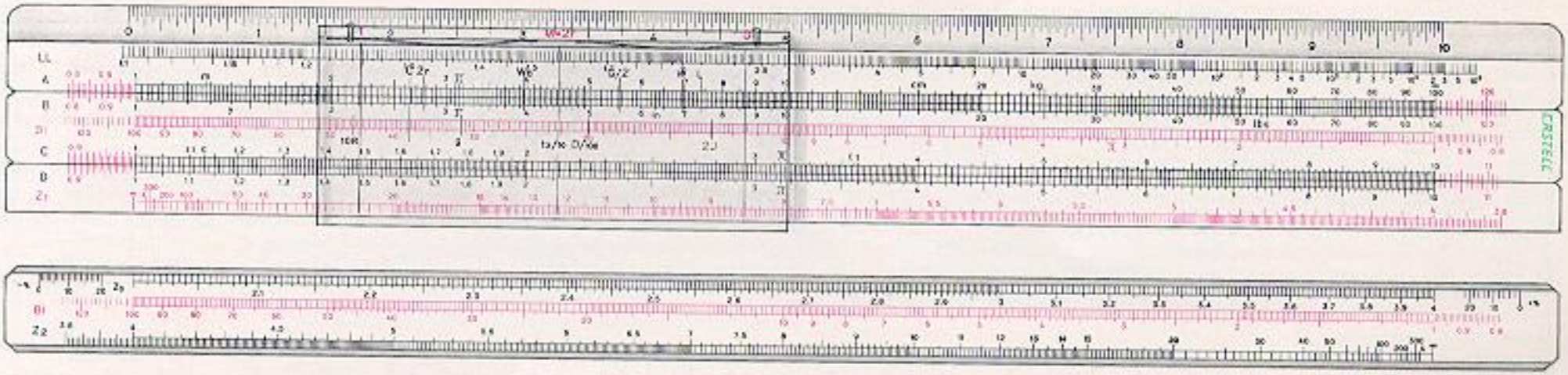
Also for tex-calculations

PROFESSIONS

Textile Engineers
Technicians
Businessmen
Estimators

Without Angle Scales

Instructions in:
English, German, French, Spanish, Swedish.



CASTELL MATHEMA

No. 2/84 Geroplast

Scales: 8" = 20 cm

FUNCTIONS (Front)

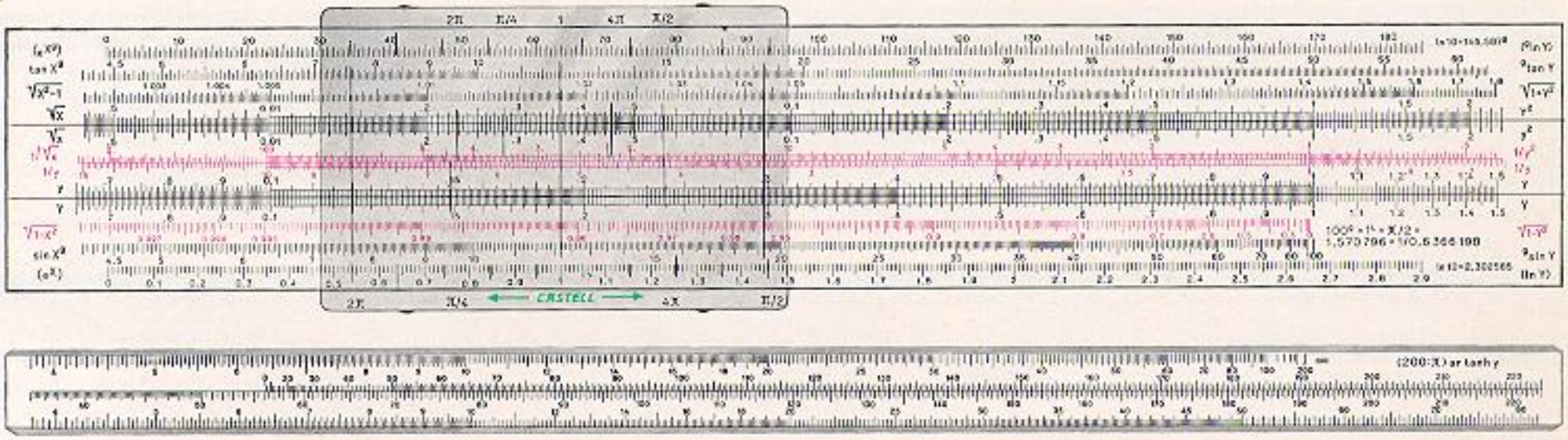
$(^g \ln Y)$	Natural logarithm (400g circle)
$^g \tan Y$	Tangent and cotangent scale (400g circle)
$\sqrt{1+Y^2}$	Hyperbolic scale (Pythagorean Scale II)
Y^2, y^2	Parabolic Scales (Quadratic scales)
$1/y^2$	Reciprocal Parabolic Scale (reciprocal quadratic scale)
$1/y$	Reciprocal Basic Scale (from 15 — 0.7)
y, Y	Basic Scales (from 0.07 — 1.5)
$\sqrt{1-Y^2}$	Circular Scale (Pythagorean Scale I)
$^g \sin Y$	Sine and Cosine Scale (400g circle)
$(\ln Y)$	Natural logarithm

PROFESSIONS

Mathematicians
Physicists

Scientific Engineers for
Thermo-Dynamics,
Aerodynamics,
High Frequency,
Telecommunications, etc.

Front of Slide Rule



FUNCTIONS (Back)

$e^{-10\,Y}$ e^{-Y} $e^{-0.1\,Y}$	Exponential scales for negative exponents
$^{g}\tanh y$	Scale of hyperbolic tangent (400g circle)
$^{g}\cosh 10\,y$	Scale of hyperbolic cosine (400g circle)
$^{g}\sinh 10\,y$	1st scale of hyperbolic sine (400g circle)
$^{g}\sinh y$	2nd scale of hyperbolic sine (400g circle)

$e^{0.1\,Y}$ e^{Y} $e^{10\,Y}$	Exponential scales for positive exponents

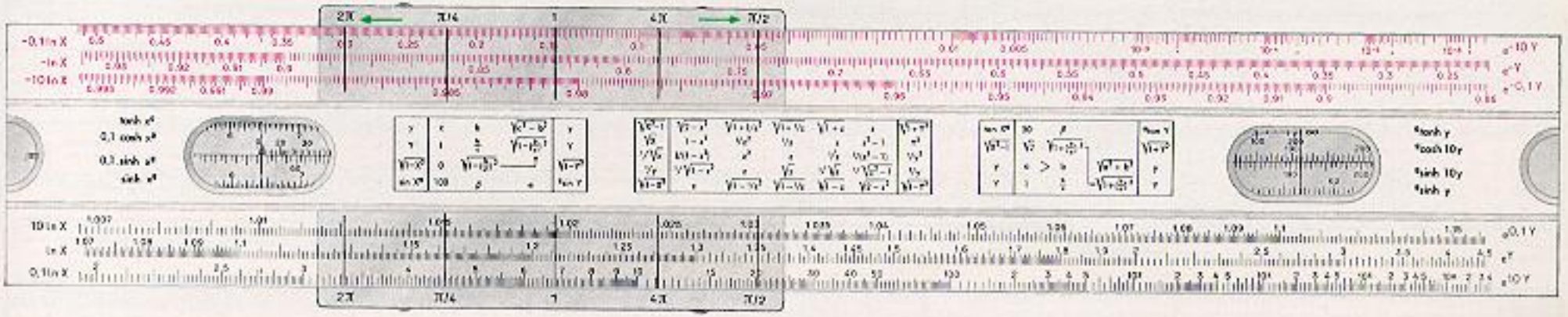
Through a special vernier arrangement of the cursor the range of application for the natural logarithm scales is extended to 10^6. Special marks on the cursor enable readings to be taken immediately.

Angle Scales 400g

Instructions in:

English, German, French.

Back of Slide Rule



CASTELL STADIA

No. 111/38	Geroplast	Scales: 10" = 25 cm
No. 4/38	Special Wood	Scales: 20" = 50 cm
No. 67/38 b	Geroplast	Scales: 5" = 12.5 cm

FUNCTIONS

Inch scale

L Logarithmic scale for calculation of mantissae and antilogarithms

A, B Quadratic scales for calculation of squares and square roots

CI Movable reciprocal basic scale for simple and compound multiplication and division, in conjunction with C and D

C, D Basic scales for multiplication, division and calculation of ratios

P Pythagorean scale for calculation of formula $y = \sqrt{1-x^2}$

S, T Sine-cosine and tan-cotan scales

BACK OF SLIDE

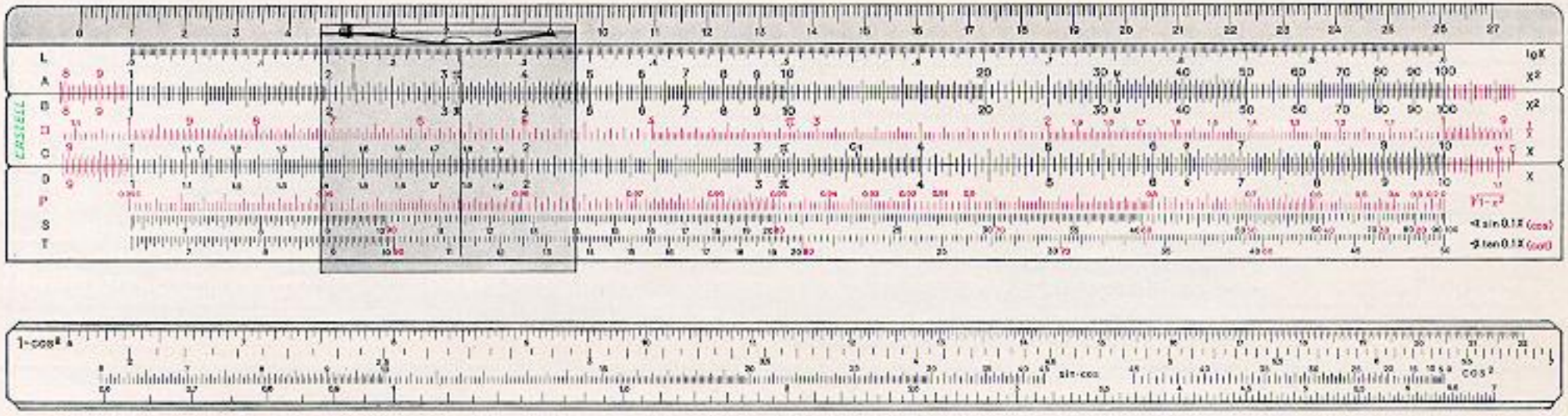
Sine-cosine and $\cos^2$ scales for determining differences in height and horizontal distance of angles up to 45° (or 40°)

PROFESSIONS

Surveyors
Geometricians
Cartographers

Angle Scales 400° (decimal)
111/38 also 360° (decimal)

Instructions in:
English, German, French, Norwegian.



CASTELL
MACHINE TIME

FUNCTIONS

Inch scale

Upper scale of body:
For machine times and performances; also usable - in conjunction with lower graduation of slide - for multiplications and divisions.

Upper scale of slide:
For operating-distance (machining-length).
For working diameter or stroke.

Lower scale of slide:
For cutting-speed.
For feed or belt-speed.

Lower scale of body:
to be used in conjunction with back of slide for multiplications and divisions.

Lower edge scale:
For r. p. m. or double strokes per minute.

BACK OF SLIDE

Upper scale:
for calculation of the belt-feed in kgs.

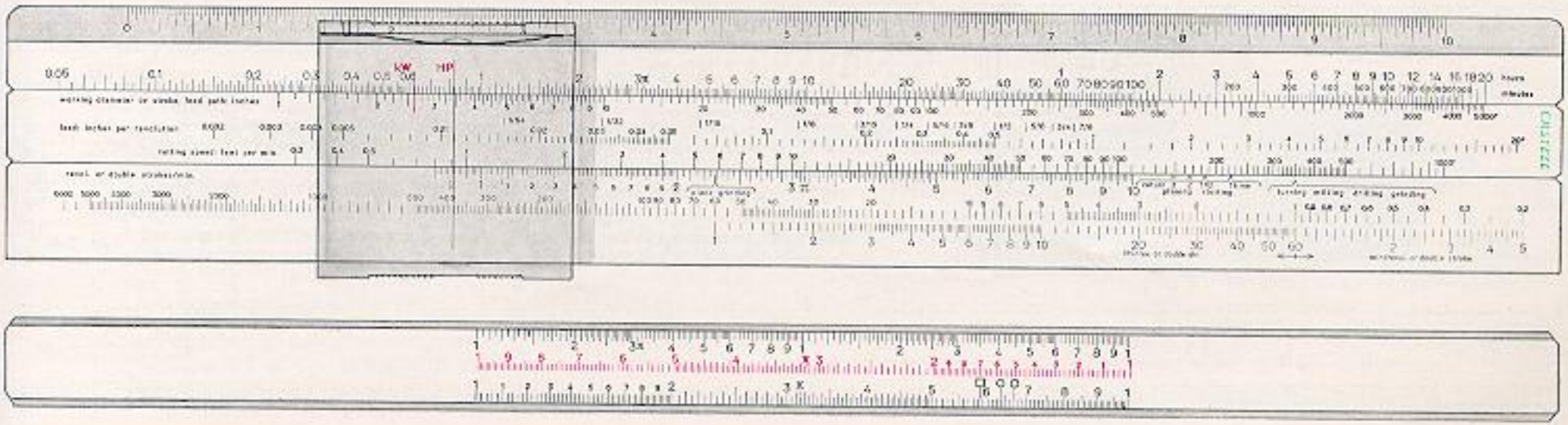
Lower scale:
for calculation of the requisite belt width in the same manner as for weight calculation.

PROFESSIONS

Technicians in Metal Industry
Works Engineers
Foremen
Factory Time Computers

Without angle scales

Instructions in:
English, German, French.



CASTELL DEMEGRAPH

No. 111/66 System Schirmer
Geroplast

Scales: 10" = 25 cm

FUNCTIONS

Inch scale

"Correction-values in yards" enable deviations in outer diameters to be corrected. Cursor with 3 lines for readings:

The continuous cursor-mark for all calculations normally carried out on the Slide Rule. The small cursor-line for taking immediate conversions of pica point values into inches or millimetres in conjunction with the continuous cursor-mark.

Red line for setting and reading the width-scales on the back of the Slide Rule.

CF, DF Upper Scales on Slide and Stock displaced by 3.6. Supplementary to C and D.

CI Movable reciprocal basic scale for simple and compound multiplication and division in conjunction with scales C and D

C, D Basic scales for multiplication, division and calculation of ratios

Paper weight scale, with index marks for the most commonly used paper sizes. Three part scale for rolled-paper lengths, from 3¹/₄" to 45" roll diameters.

BACK OF SLIDE

LL_1 Exponential scales for interest
LL_2 calculations
C Movable basic scale

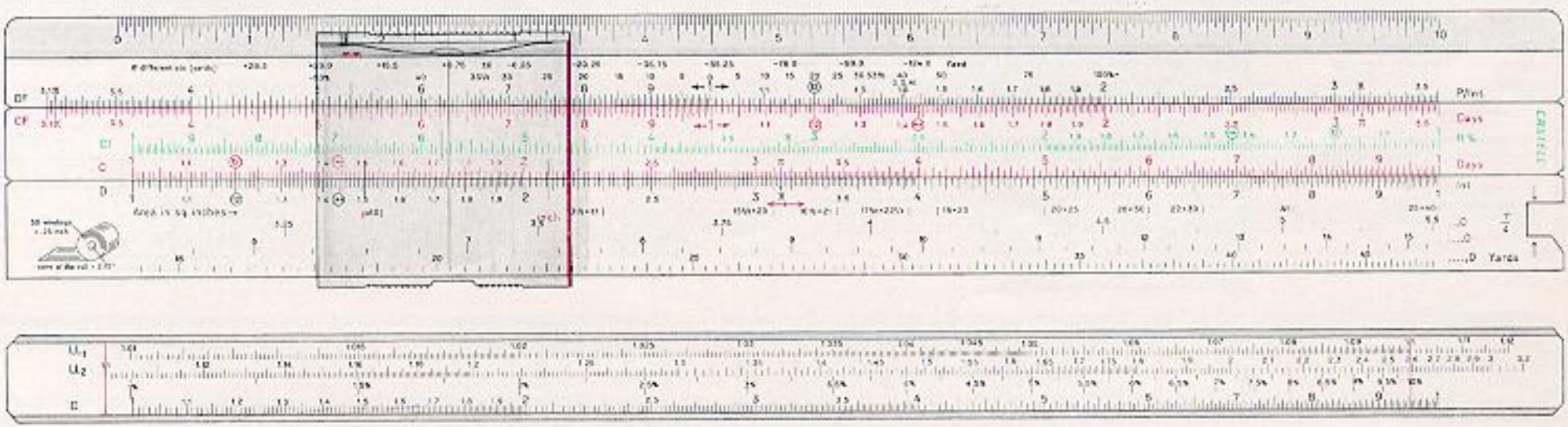
PROFESSIONS

For Typographical and Printing Trades:
Printers, Publishers, Die Makers, Suppliers to the Graphic Trades.
Advertising Departments
Paper Manufacturers

Without Angle Scales

Instructions in:

English, German, French.



BACK OF SLIDE RULE:

Width-Scales for all normal printing-letters of 6 — 12 pts. and the two typescript sizes (Perl and Normal) for calculating space occupied by MSS in any type.

Users of the Demegraph rule will also be interested in the CASTELL Typometer 20/66 SL of transparent material. This precision tabulator, as the only typometer, contains all basic printing scales from 6 to 14 points (incl. 11- and 13-pt. scales) and the typescript-scales giving the interline distances for single, double, $1^1/_2$ and $2^1/_2$ spacing.

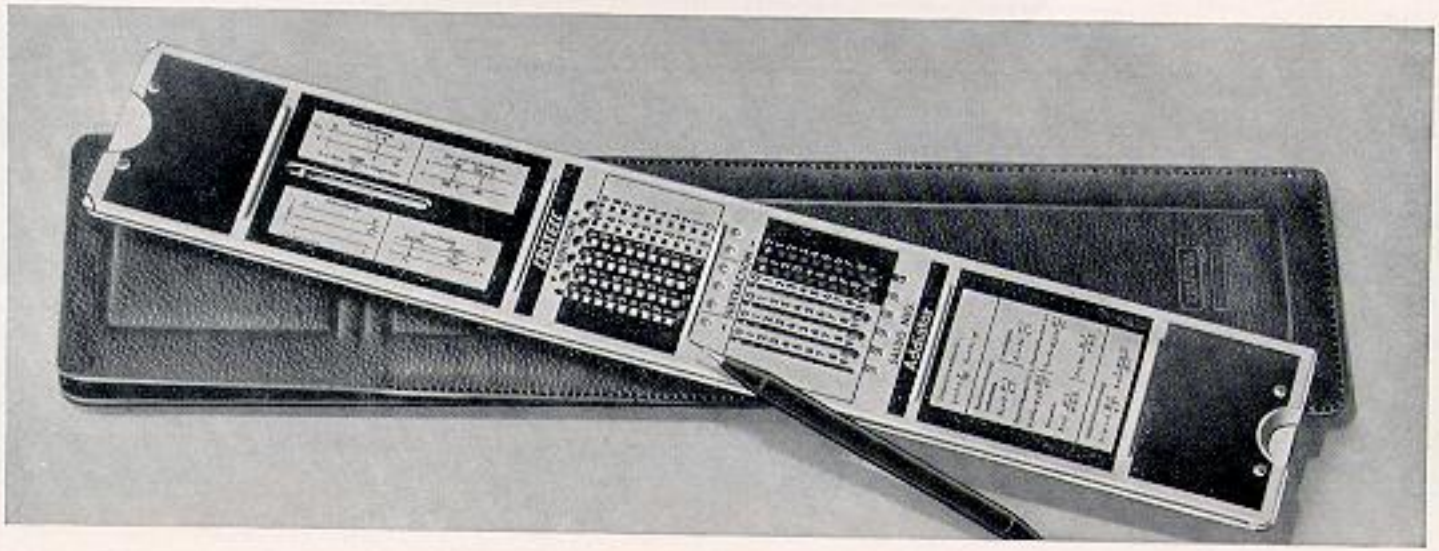
All Addiator Slide Rules are constructed from Geroplast. On the face of the rule will be found the standard scales of the system model, whilst the Addiator Calculator is built into the reverse side. This is of oxalated aluminium and permits of additions and subtractions additional to the usual slide rule calculations.
The Addiator Calculator exceeds the normal field of addition and subtraction and shows also values below zero, the negative balance: It is possible to subtract larger sums from smaller ones and to read off the negative result.

Addiator Slide Rules with 10" (25 cm) graduation length

No.	System	Field of application
111/22 A	Business	Businessmen, Commercial people
111/54 A	Darmstadt	Engineers and Technicians
111/87 A	Rietz	Engineers and Technicians

Addiator Pocket Slide Rules with 5" (12,5 cm) graduation length

No.	System	Field of application
67/22 R	Business	Businessmen
67/54 R	Darmstadt	Engineers and Technicians
67/87 R	Rietz	Engineers and Technicians
67/98 R	Electro	Electro Engineers and Technicians



CASTELL CURSORS FOR SLIDE RULES

NORMAL CURSOR, OPEN VIEW (NC)

CASTELL Slide Rules are fitted with "open-view" cursors made of plexiglass These give an absolutely unimpeded view of the entire system of graduations on the rule, the plexiglass at the sides being constructed with the same object.

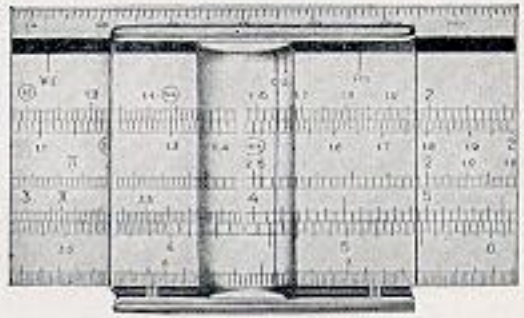
OPEN VIEW CURSOR WITH SEMI-CYLINDRICAL LENS (HL)

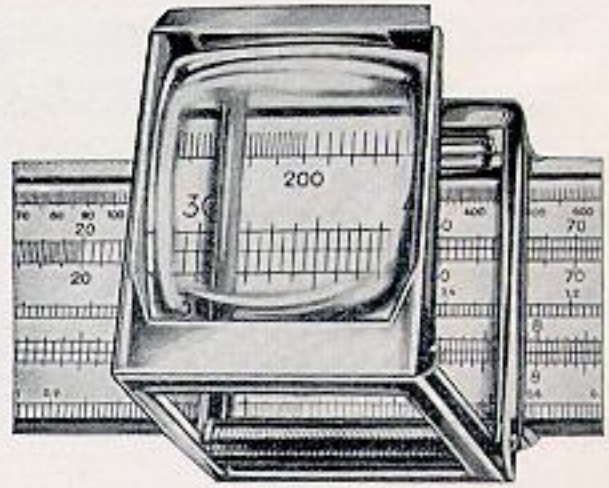
If specially required, these "open-view" cursors can be supplied with semi-cylindrical lens, giving increased accuracy in reading. With the multi-lined cursors the semi-cylindrical lens is adjustable along the cursor, according to the particular cursor-line being used.

PERISCOPIC SNAP-ON ATTACHMENT MAGNIFYING CURSOR

Giving approximately twofold magnification. Available in five types:

No. 1 L fitting the cursors for slide rules: 1/28, 1/54
No. 2 L for 1/22, 1/92, 1/98
No. 3 L for 1/60, 1/87, 57/74, 57/87, 111/87
No. 4 L for 2/82
No. 4 L/83 for 2/83





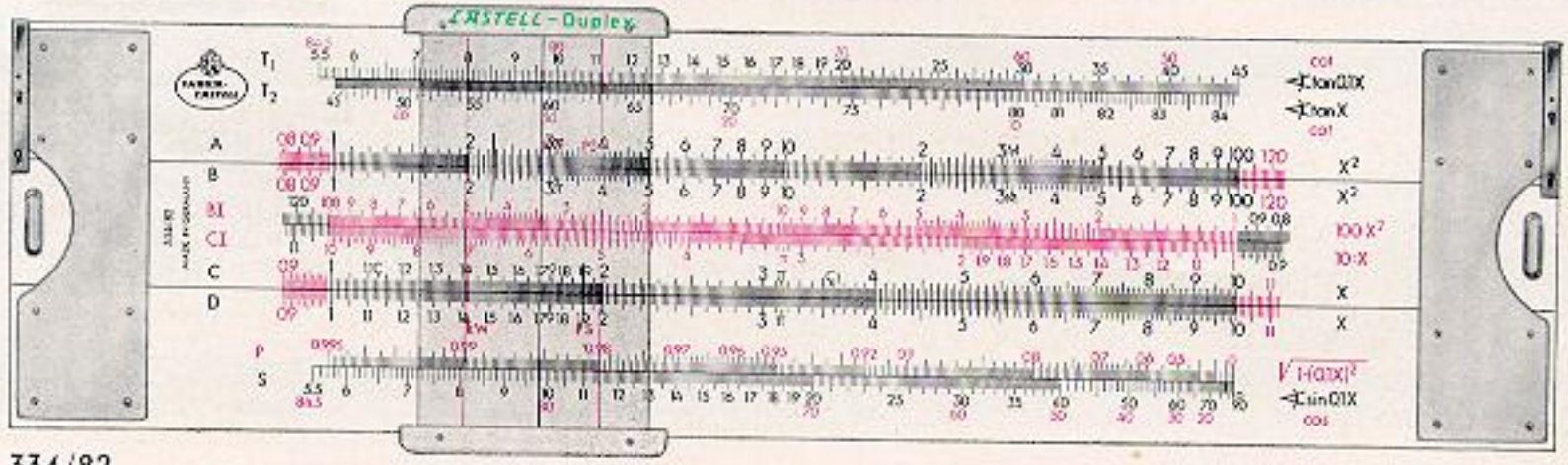
CASTELL
DEMONSTRATION SLIDE RULES

No.	System	Graduated Length		Field of application
315/22 334/22	Business Business	150 cm 100 cm	60" 40"	Commercial schools and colleges
334/52	Students Duplo	100 cm	40"	Higher modern schools, intermediate schools, technical colleges and training establishments
315/54 334/54 334/60	Darmstadt Darmstadt Basic-Trig	150 cm 100 cm 100 cm	60" 40" 40"	Higher modern schools, technical colleges and training establishments
334/82 334/83	Duplex Novo-Duplex	100 cm 100 cm	40" 40"	Higher modern schools, technical colleges and training establishments, polytechnics
334/86	Students Columbus	100 cm	40"	Primary and secondary schools
315/87 334/87 334/88 315/89 334/89	Rietz Rietz Students Advanced Rietz Students Super Log Log Students Super Log Log	150 cm 100 cm 100 cm 150 cm 100 cm	60" 40" 40" 60" 40"	Technical schools, higher modern schools, technical colleges and training establishments
334/98	Electro	100 cm	40"	Electrical and technical colleges and training establishments for electricians

CASTELL-Demonstration Slide Rules are an invaluable aid in the classroom and technical college. Their solid construction, bold markings and precise graduations enable everyone to obtain a clear understanding of the demonstration.

CASTELL-Demonstration Slide Rules are made of special wood with washable Astralon facing.

All models with a practical hanging device; double-faced slide rules with swivel mounting.



334/82

CASTELL-Statifix Evaluator

No. 991 Size 11½" × 8½" (29 × 21 cms)

Sliding Calculator for Statistics and Quality Control.

Material:
white Astralon and transparent plexiglass plate

For statistical evaluation of any series of figures; for determination of the mean value of the standard deviation and the coefficient of variation of a normal distribution.

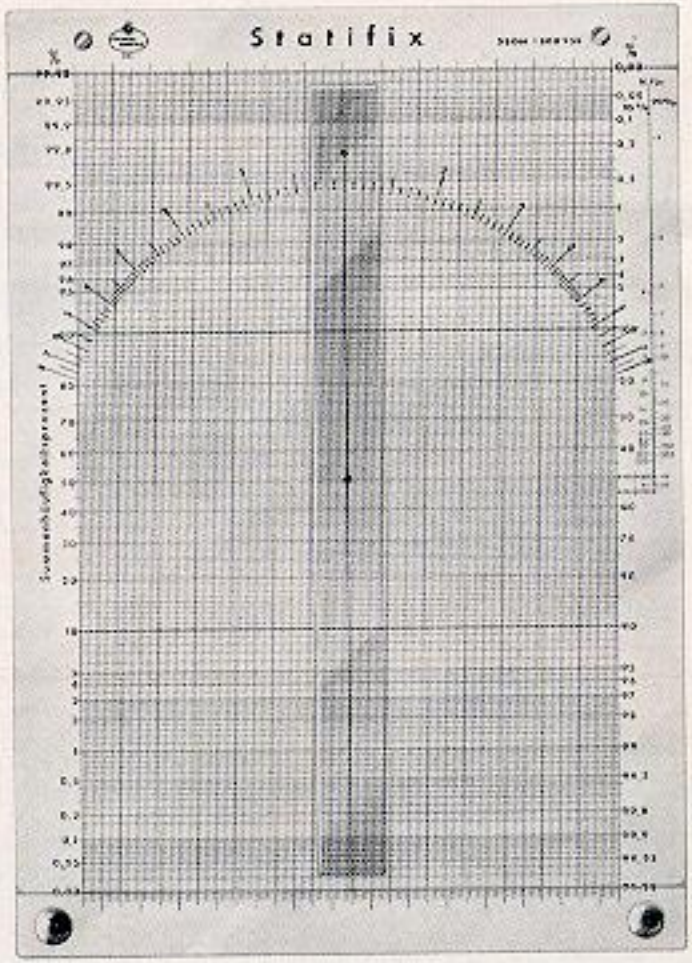
Estimation of how much and in what manner a given distribution varies from the normal.

Analysis of frequency distribution having more than one peak.

Determination of the cause of variations.

Comparison of data from various sources.

Instructions in English, German, French, Italian, Spanish, Swedish.



SLIDE RULE CLEANING MEDIUM

A special composition for cleaning plastic surfaces of slide rules and reduction scales.

No. 211 Liquid (in bottle)
No. 212 Paste (in tube)

No. 212

No. 211

The CASTELL NOVO-DUPLEX 2/83 Slide Rule in its elegant, solid plastic case.