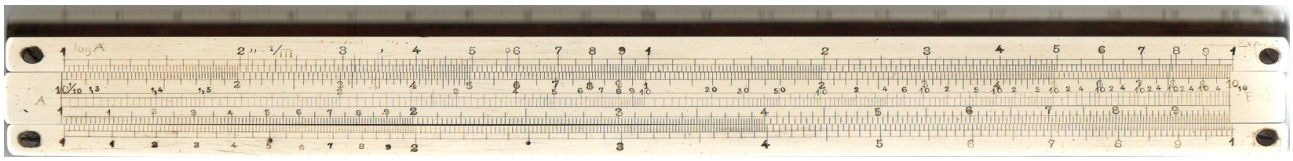
How far is the distance from Lahr to Great Britain via Switzerland?

Sometimes just 20 cm

General description

The slide rule discussed here is a System Peter model made by Albert Nestler.



The body and the slide is made of mahogany wood. The scales are made of celluloid. The scale length is 20 cm. This length can be described as exceptional. On the back are tables with mathematical and other substance constants.

Zulässige Beanspruchung in kg/cm².			
Material	Zug	Druck	Schub
Eisen, Schweiss-	900—300	900—600	720—240
Fluss-	1200—300	1200—600	900—240
Flussstahl	1500—400	1500—800	1200—320
Gusseisen	500—100	900—600	—
Stahlguss	900—200	1200—600	840—160
Kupfer	660	660	500
Granit	5—6	50—70	—

It is owned by Peter Hopp from Great Britain.

Detailed view of the design and features

The slide rule has the following markings in the well.

D.R.G.M. 41294

The utility models (D.R.G.M.) and patents (D.R.P.) used can be divided into two groups. Those that are mentioned by the marking in the well on the slide rule itself, and those that have been taken into account without mentioning them specifically.

Note: The validity period for a D.R.G.M. and a D.R.P. are different and depend on different factors. According to Karl Kleine, however, it can be assumed that a D.R.G.M. was not valid for longer than 6 years. The protection right of a D.R.P. reached a maximum of 18 years. [3]

PATENT ANGEM.

This is an indication that parts of the design have been registered with the German Patent Office. Most likely the scale layout and arrangement.

Company brand A.N

The Albert Nestler Company has used different types of manufacturer's information on its products throughout its history. Unfortunately, an exact first-hand chronological assignment has not been handed down or documented. However, Guus Craenen has compiled a rather detailed sequence in his work. For the signet used in this slide rule, he gives the period between 1895 and 1902. [1]

SCHIEBER PETER

This reference gives a clue to its original inventor. Hans-Heinrich Peter, a Swiss engineer who patented 1901 his tachymetric slide rule with a LogLog scale. [1] E. Hammer writes in an article published in 1903 in the Zeitschrift für Vermessungstechnik that Albert Nestler took over the manufacture of this slide rule. [4] It might be that Albert Nestler has already produced the slide rules which where sold by H.-H. Peter directly.

D.R.G.M. mentioned and used:

D.R.G.M. 41294

Submitted by Wilhelm Rees in 1895.

Title: Slide rule with celluloid on both sides of the body. Albert Nestler took over the rights to this D.R.G.M.

D.R.G.M. not mentioned but used:

D.R.G.M. 164885

Submitted by Albert Nestler in 1901.

Title: Scales, slide rules and the like with celluloid veneer mechanically secured by screws or pins against detachment and alteration.

Note: Describes nickel-silver screws securing laminated celluloid to the slide rule.

D.R.G.M. 172862

Submitted by Albert Nestler in 1902.

Title: Slide rule with LogLog scale on slide.

View of the back

On the reverse side at each end there is a cutout with an indicator line. The cutouts themselves are semicircular at the end. Furthermore, there is a sticker with table values on the back. The table is executed in German language. For export, there were stickers in many other languages. Albert Nestler had adjusted the size of the stickers to the length of a 20 cm slide rule. For the 25 cm models, one sticker is applied. On this model it is only about 4/5 of such a stickers.

Fetatures, special features and anomalies of the type and design

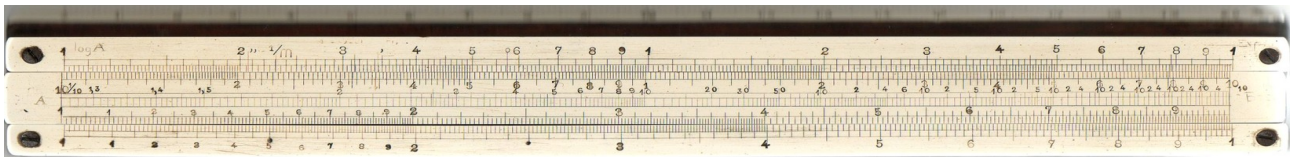
- There is a gauge mark for Pi on the A and B scale, but no Pi symbol
- There are “, 1/m, ‘, ° gauge marks at the A scale
- There is a ‘, gauge mark at the B scale
- There are some hand written/engraved(?) scale names on the front
- There is a LogLog scale in the middle of the slide, span $10^{1/10}$ - 10^{10}
- The slide doesn’t have any screws on the front to secure the celluloid
- The slide rule does carry a designation of the system, “Schieber Peter”
- The slide rule does not have a model number
- On the back there are two cutouts for the use of the trigonometric scales
- The body has 4 slots
- The body has an inner cm division
- There are two dots/holes(?) on the D scale which look “self made”

Scales

The scales are in the form of railroad track and correspond to the following scheme

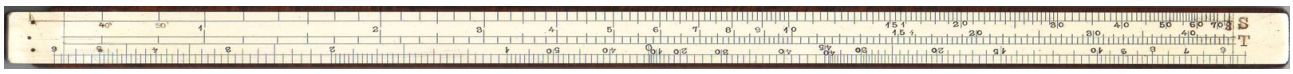
Front scales

20cm / A = B LL C = D] 22cm #22-44cm#



Back scales

= S T sin(α)×cos(α) $\cos^2(\alpha)$ sin(α)×cos(α) =



Features, special features and anomalies of the scales

- The slide doesn’t have any screws on the back to secure the celluloid
- The tachymetric scales are upside down
- The tachymetric scales are divided in three segments
- There are three dots on the left hand side which look suspicious

Additional source

As an additional source, I would like to use an advertisement by Albert Nestler.

This full-page advertisement is on the back cover of the book "Der logarithmische Rechenschieber und sein Gebrauch" by Dr. E. Hammer, Professor at the Royal Technical University of Stuttgart from 1902. Here are several references to the type and nature of the products sold at the time.

Rechenschieber in Mahagoniholz mit Celluloidauflagen

D. R. G. M. 41294 und 164885

in 10, 20, 25, 35, 50, 60 cm Länge

Rechenschieber in Buchsbaumholz.

Rechenschieber für besondere Zwecke.

Doppel-Rechenschieber.

Tachymeter verschiedener Systeme.

Artilleristische Rechenschieber u. s. w.

Fabrikmarke:

A. N.

Slide rule in mahogany wood with celluloid veneers

D. R. G. M. 41294 and 164885

in 10, 20, 25, 35, 50, 60 cm length

Slide rule in boxwood.

Slide rules for special purposes.

Duplex slide rule.

Tachymeters of various systems.

Artillery slide rules etc.

Factory mark:

A. N.

Summary and conclusion

The exact dating of Albert Nestler slide rules always poses problems for collectors. Until the 1955s, Albert Nestler refrained from applying time coding to the slide rules themselves. So you can only base your guesses on specific design features. However, this then often ends with a relatively wide corridor of years. In this case, it's a little easier.

The slide rule discussed here bears a factory mark that was used only until 1902. In the same year, the D.R.G.M. 172862 was issued for the scale layout. Based on the article of E. Hammer, Albert Nestler started the production of this system in 1903. This gives an uncertainty factor of one year.

Based on the features described above, I am convinced that the slide rule is one of the first System Peter produced by Albert Nestler.

The missing cursor is most likely one with an aluminum frame and a single hairline.

The author knows of only two other slide rules made by Albert Nestler with a scale length of 20 cm. One comes from Jürgen Nestler's collection, which he donated to the Technoseum in Mannheim. This model is also a System Peter. This one, however, in the version from after 1909. With two LogLog scale on the body. [5] The other one is a No. 13L. A System Mannheim with Magnifying Lens. This one is illustrated and described in the Nestler Gallery of the ISRM. [6]

The early design of the scale layout and the scale length of 20 cm make the specimen discussed here a very special piece.

Andreas Faßbender
October 2024

References

[1] Guus Craenen (2001), Albert Nestler, Innovation und Qualität, Die Rechenstäbe von Nestler in ihrem internationalen Umfeld

[2] Guus Craenen (2009), Rechenschieber im Wandel der Zeit 1787 - 1905

[3] Klaus Kühn, Karl Kleine (2004), Dennert & Pape ARISTO 1872 – 1978

[4] Ernst Hammer (1903), Zeitschrift für Vermessungswesen XXXII Band

[5] https://technoseum.faust-iserver.de/ Inventory number: EVZ:2009/1082-020

[6] https://sliderulemuseum.com/Nestler.shtml