Newsletter

September/October/November, 2015

From Your Newsletter Editor - Ed Chamberlain ....

Note that this issue of the Oughtred Society Newsletter covers the months of September, October and November.

The month of September was highlighted by the 21st International Meeting for Collectors of Historical Calculating Instruments in Burlingame, California. Your editor attended this meeting, and can report that there was an outstanding program of papers, auctions and tours. Bob De Cesaris and his able OS volunteers did an excellent job in organizing the program. David Sweetman and his editing staff should also be commended for the excellent proceedings that they prepared. Meeting details are reported below by your president, Bob De Cesaris.

News from the Oughtred Society's President - Bob De Cesaris ....

Highlights of IM 2015 -- Our 21st International Meeting for Collectors of Historical Calculating Instruments (24–27 September 2015, Hyatt Regency, Burlingame, CA)

This year's International Meeting, the second to be held in the US, was a great success and proved to be a very interesting time for all attendees. Our theme this year, "From Logarithms to Algorithms," focused on how slide rules and other early calculating tools have been used to change our world, exemplified today by all of the advances being made in Silicon Valley. Five members attended from Europe, representing Germany, the United Kingdom, Italy, Liechtenstein, and The Netherlands. And, one member came from faraway Israel. Others were present from literally across the entire USA, from the east coast to Hawaii. In addition, three original founders took part in our meeting this year, Werner Rudowski from Germany, and Rodger Shepherd and Bob Otnes, both from California.

The meeting began on Thursday evening with informal discussions and small gatherings for dinner at various places in the hotel. Activities on Friday included two sessions of interesting presentations and discussions by our members and were highlighted by a wonderful visit to the home of Bob Otnes, who provided a delicious dessert and a fascinating tour and discussion of highlights from his collection. On full display at his home was his outstanding collection of rare and unusual slide rules, mechanical calculators, and other mechanical devices for aiding in calculations.

The following day completed the presentations and featured our exciting auction with highlights from past-president Tom Wyman's outstanding slide rule collection and a part of past member David Gamble's Dunottar collection of engineering artifacts. The meeting was punctuated on Sunday with a tour of the Computer History Museum in Mountain View, California, where the second reproduction of the Babbage Difference Engine was demonstrated in full glory. The afternoon ended with discussions on actions needed to fulfill the Oughtred Society's educational initiatives in 2016.

**Founder Bob Otnes Explaining the Intricacies of an
Unusual Mechanical Harmonic Analyzer in his Collection**

The following papers were presented during the technical program:

"Three Specialized Slide Rules for Science and Engineering	Richard Hughes
"The Deaths of the Slide Rule	Robert James
"The Calculation of Logarithms – Some Pedagogic Aspects	Klaus Kühn
"Old Calculators & Democracy	Nicola Marras
"The Schumacher Slide Rule	Jerry McCarthy
"Logarithms and Log-Logs in the Founding Era of Sociology	David McFarland
"ST or SRT	Marion Moon
"Michael Scheffelt	Werner H. Rudowski
"The Schauer Scale Configuration	Rodger Shepherd
"A Slide Rule for Computer Memory: Logarithms for Algorithms"	David Sweetman
"Some Highlights of the IM2015Auction"	Bob De Cesaris &
	Clark McCoy

**The Auction Begins with our Outstanding Auctioneers,
Kate Mathews and Rodger Shepherd!!**

Sales Highlights for the Thomas Wyman Collection:

Slide Rule & Maker	Sale Price
Hannyngton long scale rule, with additional square roots slide	$2,200.00
M & P Pocketwatch Circular Rule with timepiece	$2,200.00
Early boxwood rule, 2 square slides, no maker	$1,700.00
Early boxwood 4 sides, 2 slides, early form	$1,700.00
Large Boxwood Sector, 12", Adams	$1,400.00
K&E 4012 Thacher Calculator	$1,000.00
Large 12" Brass Sector in hinged wooden box, Troughton London	$900.00
Froude Boxwood Rule with large metal cursor	$800.00
Book, *Construction of the Logarithms*	$700.00
K&E 4135 Power Computer	$675.00
Bone rule, 2 slide 2 side	$650.00
K&E 6" Cox Duplex, nickel all metal cursor, no case	$600.00
K&E 4012 Thacher Calculator	$600.00
Large 8" Brass Sector, No Box, Thomas Jones London	$550.00
Early boxwood 3 slides	$550.00
Book, *Arithmetique Made Eafie*	$550.00
Curta Calc Type I, serial 38786, with case	$550.00
Curta Calc Type II, serial 512664, with case	$550.00
2-piece, 2-fold boxwood Brannan's Rule	$500.00
Boxwood rule, 4 slide 4 side	$500.00
Kentish's Slide Rule	$500.00
Fuller Calculator, early version, serial 2138	$500.00

Some Rarities on Display from the
Thomas Wyman Collection

Revving up The Babbage Difference Engine
At the Computer History Museum on Sunday
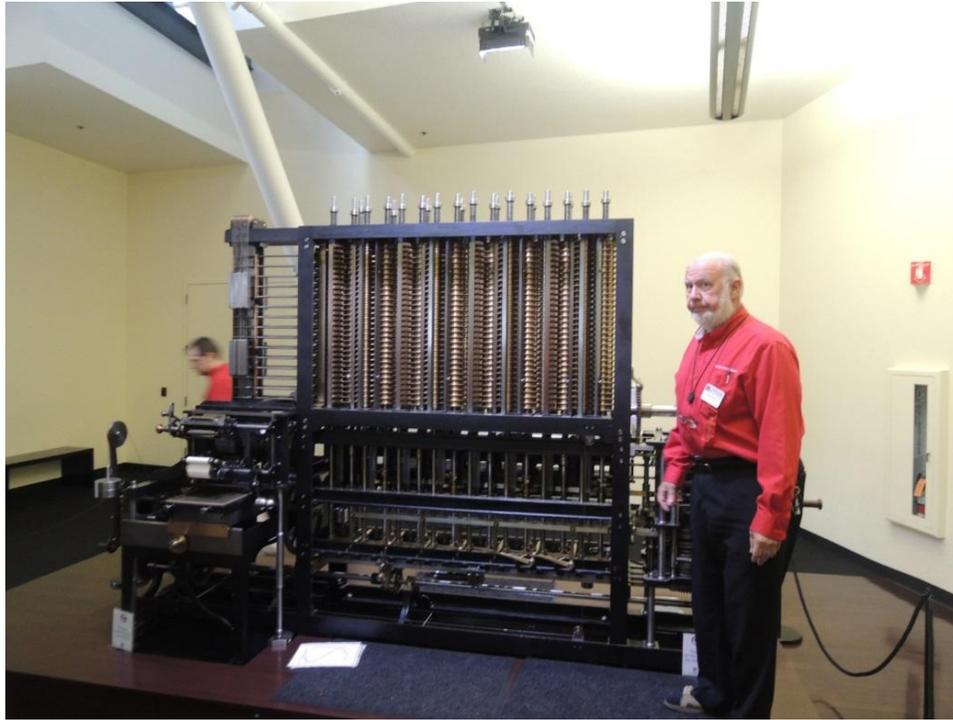
Based on the significant effort from several OS members in preparing the auction items, and also from the generosity of both estates, a part of the proceeds from both of the collections auctioned by the Oughtred Society have been added to the Society's educational fund. Discussion on Sunday included defining the process to determine the best way to use educational funds to promote numeracy and education in math and science through the use of slide rule displays, direct education, and other methods.

And, as usual, our meetings featured many old friends and many new faces and a good number of ideas on how to meet our educational imperatives. The discussions at lunch and dinner among our members always proves to be some of the most esoteric, yet very fascinating ones, undoubtedly since our membership consists of people with very broad interests and back-grounds. To close this summary, let us again recognize the IM 2015 Proceedings Committee members who were key in making this meeting such a great success: David and Donna Sweetman, for their time and teamwork as Managing Editor and Layout Editor for the IM 2015 Proceedings; feedback has been very positive both domestically and internationally on this fine publication; Clark McCoy, for his countless hours categorizing, logging, scanning and recording all of the details from the important pieces of the Thomas Wyman Collection and all of his other fantastic support for this meeting that goes beyond words; and Kate Matthews and Bob De Cesaris, for working overall communications, implementation, execution, and all of the other meeting details that involved the membership, hotel, and the families owning the collections to insure that our IM 2015 was memorable, interesting, and very enjoyable!

Reported by Bob De Cesaris with the assistance of
David Sweetman, Clark McCoy, Kate Matthews and Ed Chamberlain

New Members for the Oughtred Society Hall of Fame at IM2015 ....

Mike Konshak, representing the OS Award Committee, announced at IM 2015 that Chris Hakkaart (NL) and Ed Chamberlain (USA) were given the **Oughtred Society Award.**

Chris Hakkaart (see photo) was honored for his unwavering chairmanship of the Dutch KRING over the last 15 years, and for his stimulating leadership in organizing four successful IMs in the Netherlands (in 2003, 2007, 2010, and 2014), adding to each programme specials such as a "theme," a participants gift, the partners' outing, and more.

Ed Chamberlain was honored for his research over many years on long-scale slide rules, his systematic catalogues and publications, his special services to the Oughtred Society, such as the publication of the OS Newsletter, and his US ambassador role at many of the IMs in Europe.

Also, eight **Oughtred Fellowships** for substantial contributions to the Society were added to the rolls: Steven Casey (US), John T Catlow (UK), Tina Cordon (UK), Andries de Man (NL), Nicola Marras (IT), Brian A Purcell (US), César Quiroz (US), and Nathan Zeldes (IL).

Congratulations to all the winners of the 2015 OS Award and Fellowships from the OS Award Committee (Otto van Poelje, Mike Konshak, Peter Hopp and Peter Holland).

Reported by the OS Award Committee

Notable Slide Rules Exchanging Hands at IM2015 ....

Notable in the list of slide rules sold from the Wyman Collection was a Hannyngton Grid Iron slide rule with an extra slide for square roots. The square root slide is rare for a Hannyngton. It can also be used for determining the squares of numbers. The Wyman Hannyngton was in excellent condition and sold for a remarkably low price (for a Hannyngton) of $2,200. It did not have its original box, but the reproduction mahogany wood box that Tom had made for it was nicely crafted.

Your editor would like to tell a story about a hunt for a Hannyngton. Many years ago, I was on a hunt for slide rules in England with two noted members of the Oughtred Society. The occasion was prior to an International Meeting of the Oughtred Society in Leamington Spa. We met at the airport in London, rented a car, and took off on a hunt for slide rules in the English countryside. The meeting was still several days in the future. We were striking out to find important slide rules at antique shops, '*car boot sales,'* and a large regional antique fair in Newark. Our conversations soon turned to a discussion of what our *Holy Grail* find would be for this hunt.

You guessed it! It would be a Hannyngton gridiron slide rule. One of the senior collectors among us (not me) suggested a protocol for who should get the first chance at a Hannyngton, if

we found one. To make the rules for our hunt fair, the most senior collector among us suggested that should we find a box of five Hannyngtons that he would get the first choice. The other senior member would then get the second choice, and I, the junior member in the group, would get the remaining three Hannyngtons in the box. Now, this protocol presumed that we would find a box of five Hannyngtons. Given the chance of finding just one in a box was virtually nil, the most senior collector in our group was not taking much of a chance of missing something. To find two Hannyngton examples would be statistically unlikely, and to find three or more would be a miracle. From the start, that left me holding the *'empty bag,'* so to speak.

It should be said that we did not see any Hannyngtons during our hunt for the *Holy Grail*, and the three of us were left with just a good story to tell about our hunt for the Holy Grail of slide rules. I will leave it to the reader to sort out who-was-who in this hunt. It would be a few years later when on a hunt by myself that I found a Hannyngton Gridiron slide rule to fill an important gap in my collection of long scale slide rules.

Also notable amongst the Wyman Collection slide rules sold at IM 2015 was a Meyrat & Perdrizet pocket watch calculator with a timepiece in the center. Tom Wyman wrote about this scarce circular slide rule in the Spring 2013 issue of the Journal of the Oughtred Society. He stated that this was "*the first true combination time-piece and slide rule,"* and referred to it as a '*Rosetta Stone'* of slide rules. It was first introduced by a small shop in eastern France near the Swiss border. M & P also produced a version of their pocket-watch calculator without a timepiece in its center. That version is much more common than the model with the pocket watch feature.

So we had examples of both the *Holly Grail* and the *Rosetta Stone* of slide rules at auction at IM 2015. There were, of course, many other calculating rules of note sold, in addition to those listed in the table above, including:

1. 12.5 cm Dennert & Pape pocket slide rule with a chisel cursor. $200
2. K & E Sperry pocket-watch slide rule with bound instructions. $600
3. Tavernier-Gravet slide rule for calculating butter fat solids in milk. $400
4. A rare early R.H. Smith cylindrical slide rule. $1600
5. 12.5 cm Tavernier-Gravet slide rule with magnifying cursor. $200
6. Brass Sector by Lenoir dating to the early 1800s $600
7. 20th-century reproduction set of Napier's Bones. $100

R. H. Smith Calculator, Early Version

For all slide rule sales at IM 2015, more than $30,000 exchanged hands.

Reported by Ed Chamberlain

Announcement: Annual Meeting of the Oughtred Society for 2016 ....

The Annual Meeting of the Oughtred Society for 2016 has been combined with the Las Vegas meeting and will be held May 7, 2016 at the National Atomic Testing Museum in Las Vegas. A block of rooms has been reserved at the Four Points by Sheraton Las Vegas East Flamingo Hotel. An optional buffet dinner will be served at the hotel both Friday evening and after the meeting on Saturday. In addition to the many slide rules for auction, swap, and sale, there will also a large number of slide rules from the Tom Wyman collection included in the auction. Three presentations are currently scheduled for this meeting. Mark your calendars now to attend this meeting! Watch your email for further details.

Reported by David Sweetman

Announcement: Archive Your Collections on the Oughtred Society's Web Site ......

INTRODUCTION: The purpose of this Archive is to preserve collections of members for posterity and for viewing by slide rule enthusiasts worldwide.

The initial collection posted is that of Tom Wyman, who specialized in old English gauging rules and other top quality rules of many types. The slide rules in Tom's collection date back to the 1700s, and the slide rule books date back to Oughtred's book of 1633. Over 338 items are pictured and described. Detailed photos are available for all items. This archive was created by Clark McCoy, who photographed and listed the items in Tom's collection, and by Rod Lovett, who created the display on the Oughtred Society web site, and by Richard Davis and Ted Hume, who created the thumbnail images and wrote the captions. Please visit this new page on the Oughtred Society's website – Archive of Collections. See http://osgalleries.org/collectors/

INVITATION: We invite you to consider posting your collection on the OS website for posterity. For more information, please contact us at oughtredsociety@comcast.net

Reported by Richard Davis and Ted Hume

News from the Dutch Circle ....

Otto van Poelje reported bargain prices for remaining Proceedings for IM 2014. In 2014, the Dutch Circle organized the successful IM 2014 con-ference in Delft, the Netherlands. The Proceedings book, 185 pages in paperback with all the presentations held at IM 2014, have almost been sold out. The remaining stock is now offered at special prices:
- the paper IM 2014 Proceedings book (including 1 IM 2014 CD) is now 40 Euros, including shipping costs to anywhere.
- the digital Proceedings on CD are now 7 Euros, including shipping costs to anywhere.

The IM 2014 CD contains all the papers in the Proceedings plus the complete FUJI Catalogue, in a single PDF file with easy navigation by mouse clicks in the index. Please check availability of remaining stock before ordering!

Orders with full address information can be sent by email to ovpoelje@gmail.com, with direct payments – within the EU – to bank account:
HR O E VAN POELJE, BIC = INGBNL2A, IBAN = NL13 INGB 0000 1252 07.

Payments from outside the EU should be sent to the PayPal account of: ovpoelje@gmail.com

Below are summaries of the twelve papers that were presented at IM 2014:

1. ALRO Calculating Disc for Optical Ray Tracing: Otto van Poelje reports on a newly found ALRO desktop-sized disc from 1939.
2. A "Mystery" PTT Slide Rule from the Netherlands: Jerry McCarthy analyses and explains the scales of the NL PTT cable radio slide rule.
3. Turning and Sliding in the Spinning and Weaving Factory with the LOGA discs: Nico Smallenburg describes the use of LOGA calculating disks in the yarn spinning industry.
4. Extreme Sliding – Base Jumping with the Radix 2/10 Binary/Decimal Slide Rule: Colin Tombeur describes his design – and the production at his home – of a logarithmic slide rule based on the binary number system.
5. Old Computing & New Generations: Teaching Slide Rules and Other Historical Calculating Instruments at Schools and Fairs, by Nicola Marras.
6. The Ross Precision Computer – Types I & II, A New Perspective: Ed Chamberlain describes two successive versions of these long spiral-scale discs.
7. FUJI - Circling the World with Straight Slide Rules: Jose Fernández catalogued a large number of slide rules by Fuji.
8. Maximator Valorect – A New but Unsuccessful Treatment of Logarithms with a Digital Adder: by Stephan Weiss.
9. Graphic Logarithmic Tables: – A Picture Should Be Worth A Million Numbers: David Rance shows how regular logarithmic tables can be represented as dual scales with log values and opposite anti-log values.
10. NuPuBest and EFluBest: Andries de Man describes different kinds of toolboxes to model forces and their deforming effects in structural analysis. Meccano-like beam and fixture construction.
11. How to Draw a Logarithmic Curve: Stefan Drechsler & Barbara Haeberlin give an overview of historical drawing instruments to produce special mathematical curves.
12. Milling Numbers – Discovering the Millionaire Calculator: Dirk Rietveld shares with the reader his experiences in discovering the Millionaire mechanical.
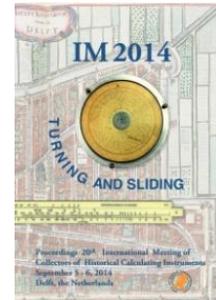
The Proceedings end with descriptions of twelve "one of a kind" slide rules, including Thornton and Casella slide rules with "mystery" scales, a new D&P disc in brass with trig scales (never seen before), a metal disc (45 cm diameter and weighing 6 kg) by Gebrüder Fromme in Austria for interest calculations, and more.

Reported by Otto van Poelje, OS Member in The Netherlands

The Spring and Fall 2016 OS Journals ....
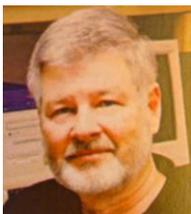
David Sweetman has been busy putting together the *Spring, 2016 issue of the OS journal*. Below is a list of the articles and their authors. Note that there will be six papers about Louis Ross and his slide rules. The paper by David Lee Ingram includes a discussion of the Ross Meridiograph circular slide rule. The other five papers are about Ross slide rules, and are authored or co-authored by Ed Chamberlain and Richard Davis. Note that Ed and Richard try to solve the mystery of look-a-like circular slide rules: the Louis Ross Rapid Computer and the John Ross Dempster RotaRule.

"Slide Rule Problems"	Gary Flom
"The Surveyor and Slide Rules"	David Lee Ingram
"The Ross Precision Computer"	Edwin J. Chamberlain
"The Ross Rapid Computer"	W. Richard Davis
"The Ross Student Rapid Computer"	W. Richard Davis
"A Biography of Louis Ross"	Edwin J. Chamberlain
"The Ross Rapid Computer/Dempster RotaRule Mystery!"	Edwin J. Chamberlain and W. Richard Davis
"Pencil Slide Rules—Part 5: The Digital Transition"	Rodger Shepherd
"The Gerber Derivimeter"	Paul McConnell
"New to Slide Rules in the 21st Century"	Phil Rodley
"Recommended Reading: Napier Tercentenary Memorial Volume"	David Sweetman

The *Fall 2016 issue of the OS Journal* needs a few more articles. Authors are encouraged to contact David Sweetman at: d-dsweetman@att.net with proposals for papers. Below is a list accepted so far.

"Tavernier-Gravet Slide Rules"	Marc Thomas
"A Poor Man's Collection"	Roger Dollarhide
"The Hemmi 154"	Richard Hughes
"More on Sterling Adders"	David Riches
"The Kally Slide Rule"	Nathan Zeldes
"Slide Rules Made in Spain"	Jose G. Fernández

Reported by David Sweetman

Report from Membership Secretary: Clark McCoy ....

The membership renewal process is going well. To date we have over 400 members signed up for 2015. The following are new members:

T. S. Edwards	United Kingdom
Terry Kirkpatrick	Florida
Kevin Fontes	Kentucky
Rommel John Miller	Maryland
Daniel Holdren	New York
Gary G. Hinkle	Arizona

Welcome to the Oughtred Society! Congratulations to our new members. We hope that you enjoy the rewards of your OS membership, and encourage you join in on the Oughtred Society activities. To old members, if you have not renewed your membership yet, it is easy to do. Just go to the Oughtred Society homepage at:

<**http://www.oughtred.org/**>

and click on **"Membership"** and follow instructions. You can pay online by credit card or PayPal, or you can pay by check—the old fashioned way.

Reported by Clark McCoy

Human Interest Contribution from a New Zealand Collector ....

Member Phil Rodley wrote about the semingly ordinary slide rule pictured to the right: "What do you think this looks like?" If you answered a small Pickett slide rule or even a N600ES you are obviously not my 4-year-old grandson who informs me, after taking it out of my shirt pocket: *"It looks like a light sabre."*
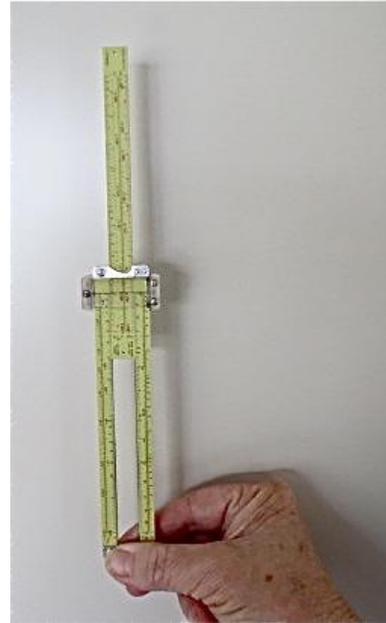
His 5-year-old brother knows that *Pop* has slide rules and is slightly intriged with them, so I bought a bright coloured (Yes, that is the correct spelling!) Aristo 0908 for him, and taped his name to its bright red and white case. I will let him "discover" it amongst my collection and see how he gets on, and let you know. At the moment he has only learnt "pluses" and "minus's," and is now learning to count in threes, obviously a precurser to the times tables.

Yes you can still buy new slide rules! I am universally chucked off at work for my interest in slide rules, the usual "get out of the last century and get into this one." One day, one of my workmates brought in his newish Citizen Ecomaster SST watch to show me. Whilst pushing buttons on it and showing me how it seemingly did everything except make your tea in the morning, I was looking at the numbers around the side ring: 16, 17, 18, about a quarter of the way around, and 31 or 32-ish halfway around. I asked to have a look at it, yes two circles of logrithmic scales. I asked him what these were for. The reply: *"Oh I don't know, something to do with working out fuel efficiency."* I then informed the nonplussed owner that he had a slide rule, and declared: *"I believe you can still buy these brand new slide rules with a watch attached!"*

Reported by Phil Rodley, OS Member in New Zealand

Another Reader Contribution, This One From The Netherlands ....

David Rance wrote regarding a piece in the June/July/August issue of the OS Newsletter: "In your lead item you ask if anyone knows of a slide rule that can estimate the power output of solar panels for a certain latitude and climate. Given its recent popularity, I suspect there are many downloadable "apps" for this purpose but I only know of **one** specialist slide rule that comes even close – the **SUNCAL**. Even as specialist slide rules go this is an ultra-rare and strange beast. The figure below is courtesy of Herman van Herwijnen's Archive. Note that it is of the slide-card type, and that there are several additional pieces to it.
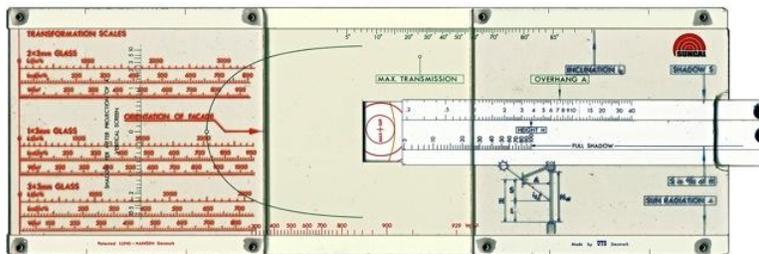
The SUNCAL was specially commissioned from Danish maker UTO by the SUNCAL Corporation of Sködstrop, Denmark. Its purpose is to quickly and reliably calculate the amount of solar heat radiation through glass. Significantly, the calculation process includes allowances for the shadow effects of building overhangs and/or facades, the time of the year (down to the day) and the geographical latitude. The slide rule is based on a patent by a Dane: Lund-Hansen. Sadly it is not part of my

collection but there is a full write-up of it in IJzebrand Schuitema's 2003 book, *Technical Cultural Heritage*" (pages 125-131).

Next to catch my eye was Bob Soltis' item on the **N700-T Aerial Photo Slide Rule**. Bob only mentions the 6-inch pocket Type A-2 model, but there is also a big-brother model – the **520-T Type A-1**. I was attracted to both models (I have both) because of my interest in pouch-clips. As Bob mentions, these Picketts have a unique extra pouch feature – an extra "in-flight" aid. The external cutout pouch window displays a paper table of conversion factors, etc. But, Bob fails to mention another unique (I think) feature of these rules. The special scales and gauge marks were designed by A.H. Katz for planning and carrying out Air Force missions using aerial photographs. As the range of some scales is large, all the values are unconventionally printed perpendicular to the stock. Quirkily, this means **it is designed so that the slide rule has to be used vertically!** It gets a mention in part V (!) of my pouch clip pentalogy published in 2013.

Write David at david.rance@xs4all.nl for more details of the SUNCAL and the N700-T.

Reported by David Rance, OS Member in The Netherlands

On The Serious/Humor Side ....

"Eccentric Doctors" by Alan Wykes
Mowbrays Eccentric Series, London, 1975 Chap. 10 covers Roget, 1779 - 1869
Cartoon illustrating all of Roget's foibles and inventions, inc. Log-log Slide Rule

Did you know that the same Roget who wrote Roget's Thesaurus invented the Log Log scale for slide rules? Peter Mark Roget was an eccentric doctor of medicine who had an interest in physiology, natural theology, and the diffusion of knowledge. He also invented and solved chess problems, and invented a pocket chessboard. Roget invented the Log Log scale in 1814, long before it came into common use in K&E slide rules in c1909.

This cartoon illustrates all of Roget's foibles and inventions, including the Log Log Slide Rule and several dictionary sized thesauruses. (From: Alan Wykes, *Eccentric Doctors,* Mowbrays Eccentric Series (Mowbray: London, 1975). Chapter 10 covers Roget, 1779–1869)

Reported by Ed Chamberlain

. . . . . Send Newsletter Contributions to: edwin_chamberlain@valley.net . . . . .

BEST WISHES FOR A HAPPY NEW YEAR