

AccessionIndex: TCD-SCSS-U.20121208.043

Accession Date: 8-Dec-2012

Accession By: Prof.J.G.Byrne

Object name: Unique Sliderules

Vintage: c.19xx

Synopsis: Sliderules by the Unique Slide Rule Company (U.S.R.C.).

Description:

These sliderules were manufactured by the Unique Slide Rule Company (U.S.R.C.), established by Burns Snodgrass in 1920.

Photographs courtesy Prof.J.G.Byrne and Dr.Arthur Hughes.

The homepage for this catalog is at: <https://www.scss.tcd.ie/SCSSTreasuresCatalog/>

Click 'Accession Index' (1st column listed) for related folder, or 'About' for further guidance.

| Accession Index | Location | Vintage | Object and Identification |
|----------------------------|----------|---------|--|
| TCD-SCSS-U.20121208.043.01 | | c.19xx | <Mfgr?> <model?> sliderule. S/N: <??? |
| TCD-SCSS-U.20121208.043.02 | | c.19xx | |
| TCD-SCSS-U.20121208.043.03 | | c.198x | |
| TCD-SCSS-U.20121208.043.04 | | c.198x | |
| TCD-SCSS-U.20121208.043.05 | | c.19xx | |
| TCD-SCSS-U.20121208.043.06 | | c.198x | |
| | | | |

The following instruction manuals are properly part of the literature category of this catalog, but are listed here too for convenience.

| Accession Index | Object with Identification |
|-------------------------|----------------------------|
| TCD-SCSS-V.20121208.??? | |

References:

1. International Sliderule Museum, *Unique Slide Rule Company (U.S.R.C.)*, see: <http://www.sliderulemuseum.com/Unique.htm>
2. Authors, *Title*, Publication, Publisher, Date.
3. Authors, *Title*, Publication, Publisher, Date.

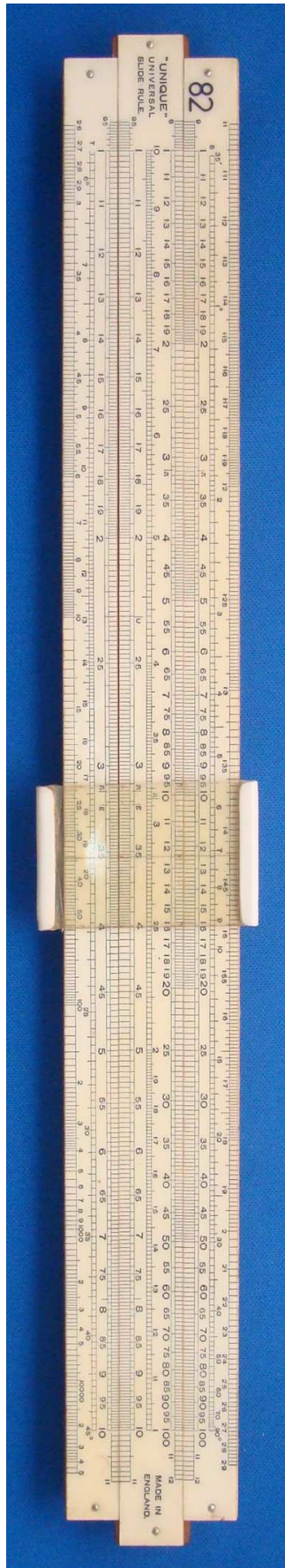


Figure 1: TCD-SCSS-U.20121208.043-fig01

| | |
|---------------------------------------|--------------|
| Portable Battery Powerhouse. | 125/100-9000 |
| Beatings for very slow speed. | 7000-9000 |
| Beatings for slow intermediate speed. | 5000-6000 |
| Beatings for fast intermediate speed. | 3000-4000 |
| Locomotive Outdrum. | 1500-1000 |
| Locomotive Driving Journals. | 1500-2200 |
| Stationary Engines Outdrum. | 1000-1800 |
| Stationary Engines Crankpins. | 200-400 |
| Stationary Engines Main Bearings. | 200-400 |
| Locomotive Engines Main Bearings. | 200-400 |
| Locomotive Engines Crankpins. | 200-400 |
| Light Line shafts. (Spas on Lubitt) | 15-25 |
| Light Line shafts. (C.I. bearings) | 10-12 |
| Generator & Dynamo Bearings. | 30-60 |

Figure 2: TCD-SCSS-U.20121208.043-fig02

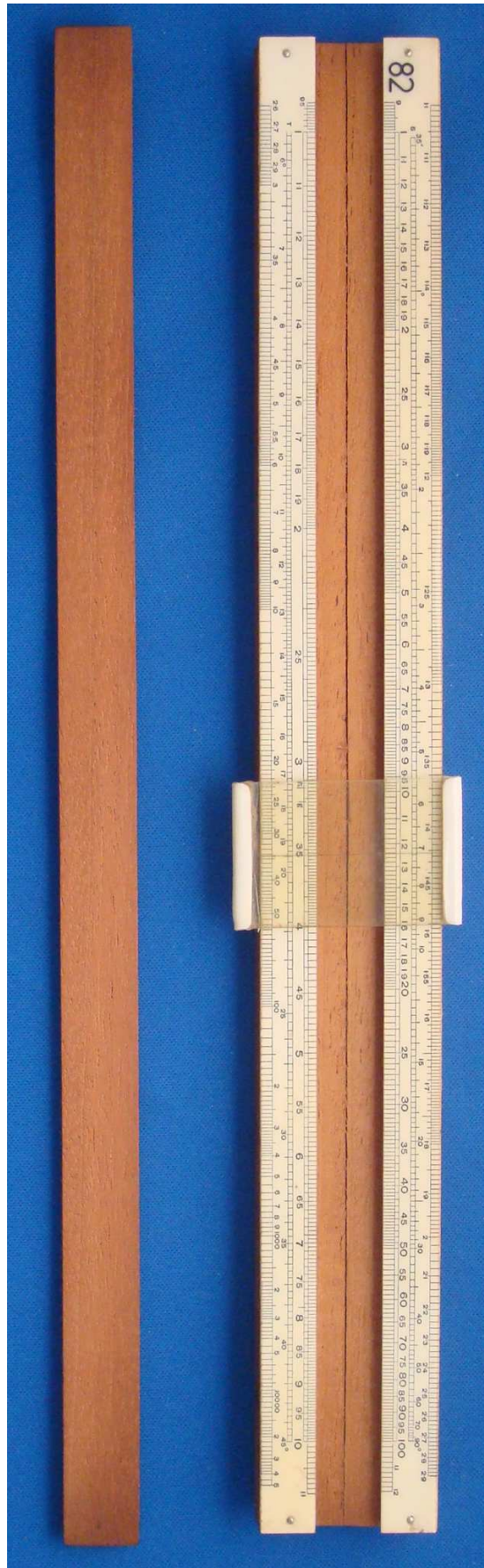


Figure 3: TCD-SCSS-U.20121208.043-fig03

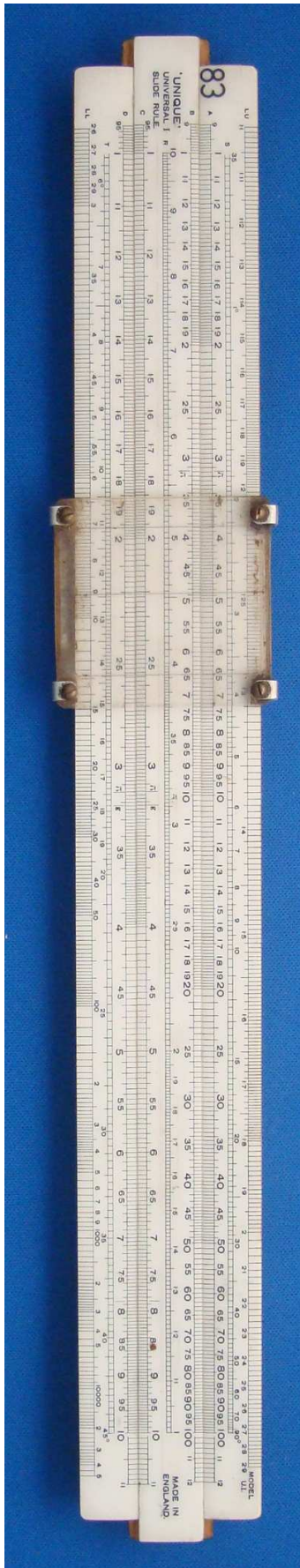


Figure 4: TCD-SCSS-U.20121208.043-fig04

| RATES OF EXCHANGE. | | | | |
|--|--------------------------------------|-----------------------|-------------------|--|
| 746 watts = 1 H.P. = 550 ft. lbs./sec. 434 grains = 1 lb. 2.54 cms. = 1 inch. 6650 cent. = 1 ft. 1.8 inches = 1 yard. 0.680 cent. = 1 inch 1.8 inches = 1 calorie. 778 ft. lbs. = 1 B.T.U. = 252 calories. 1 cube ft. = 6.25 gallons = 32.3 litres. 60 mins./hour = 86400 secs. 1 radian = 180°/degrees = 3438 minutes. | | | | |
| Material. | Density (lbs./ft. ³ .) | Specific Heat. | Boiling Point. | |
| Air at N.T.P. | 0.081 | 0.238 (con. pressure) | 658° C. | |
| Aluminum ... | 168 | 0.217 | 900 | |
| Brass ... | 520 | 0.092 | 1053 | |
| Copper ... | 550 | 0.105 | 1083 | |
| Lead ... | 710 | 0.030 | 327 | |
| Mercury ... | 850 | 0.033 | 357.9 | |
| Steel, V. ... | 490 | 0.115 | 1480 | |
| Water ... | 62.5 | 1.00 | 0-0 | |
| Sea Water ... | 64 | 0.94 | — | |
| ELECTROCHEMICAL EQUIVALENTS. | | | | |
| Silver 0.001118 grams/coulomb. Copper 0.000329 grams/coulomb. Hydrogen 0.000104 grams/coulomb. E.M.F. of W/S Cell = 1.0183 volts. | | | | |
| Material. | Specific Resistance | Temperature Coefft. | | |
| Aluminum | 2.82 microhm/cm. cube | 0.0036 per °C. | | |
| Carbon | 44 " | 0.00001 " | | |
| Manganin | 44 " | 0.00001 " | | |
| Platinum | 38 " | 0.00028 " | | |
| Tungsten | 3.5 " | 0.0052 " | | |
| ATOMIC WEIGHTS. | | | | |
| "g" = 32.2 ft./sec. ² = 981 cm./sec. ² "g" = 2718 N.T.P. = 0° C. 14.7 lbs./in. ² | | | | |
| Al : 108 | K : 39.1 | | | |
| C : 12.0 | Na : 23.0 | | | |
| Ca : 40.1 | O : 16.0 | | | |
| Cl : 35.5 | P : 31.0 | | | |
| Fe : 55.8 | S : 32.1 | | | |
| Hg : 201 | Zn : 65.4 | | | |

Figure 5: TCD-SCSS-U.20121208.043-fig05

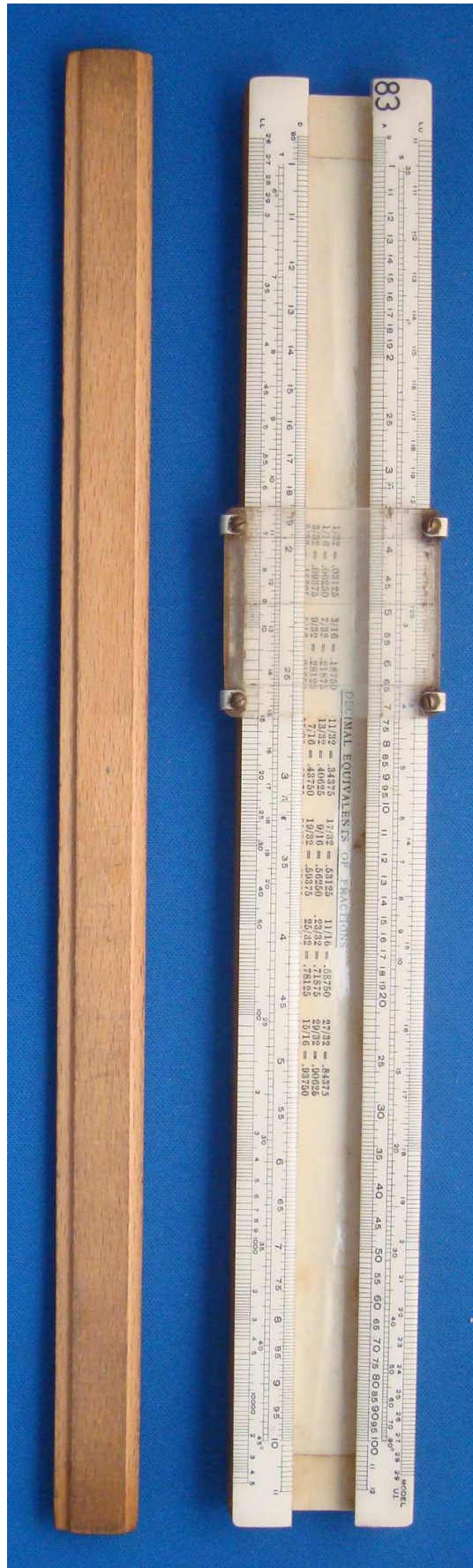


Figure 6: TCD-SCSS-U.20121208.043-fig06

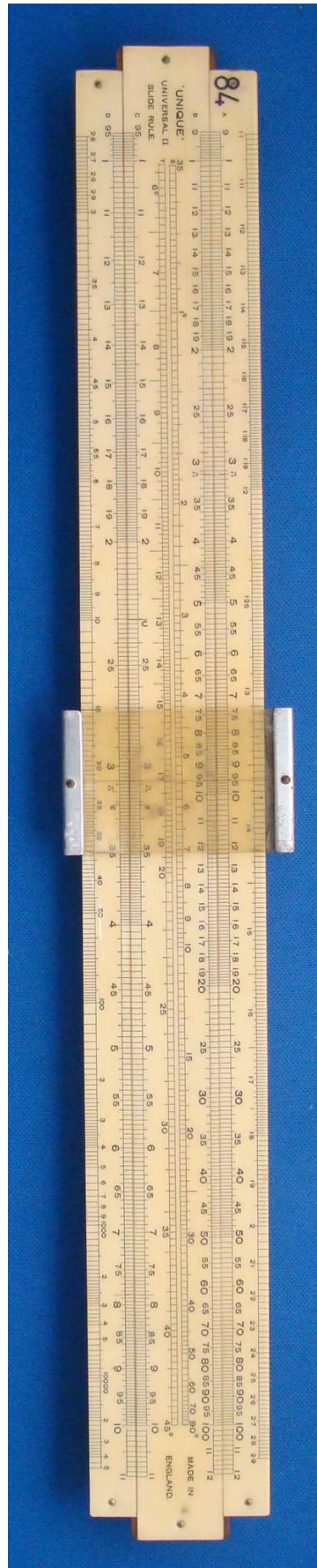


Figure 7: TCD-SCSS-U.20121208.043-fig07

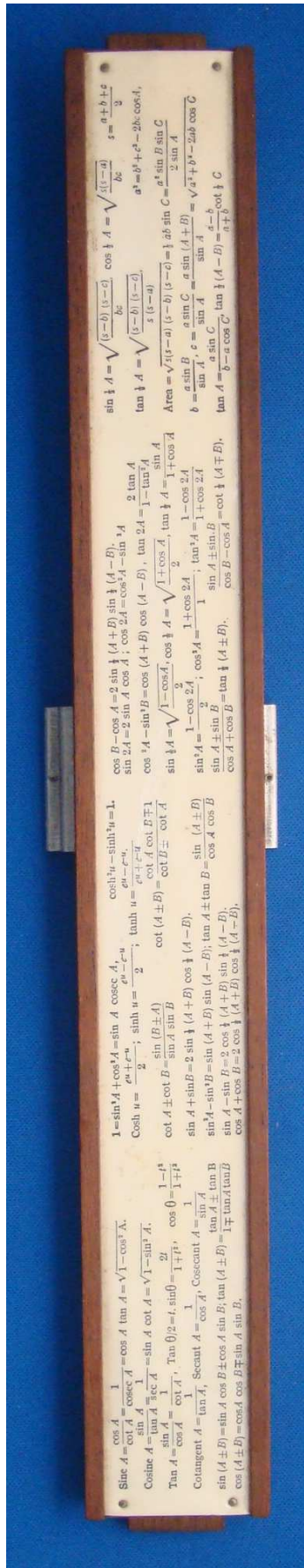


Figure 8: TCD-SCSS-U.20121208.043-fig08

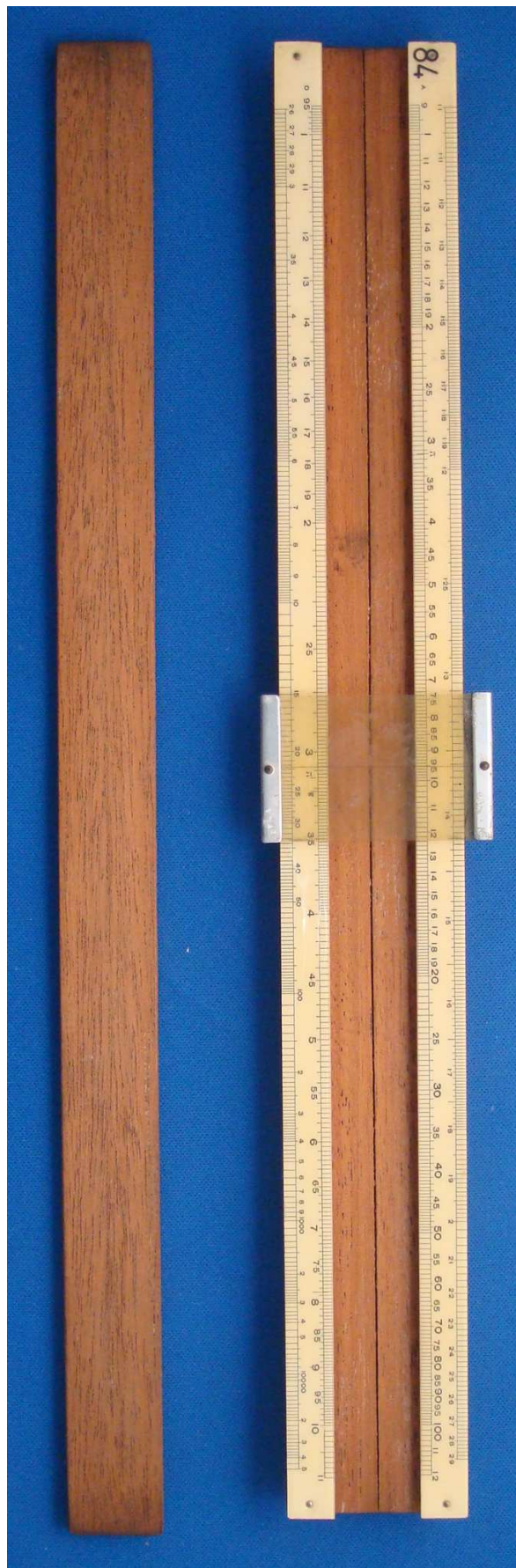


Figure 9: TCD-SCSS-U.20121208.043-fig09

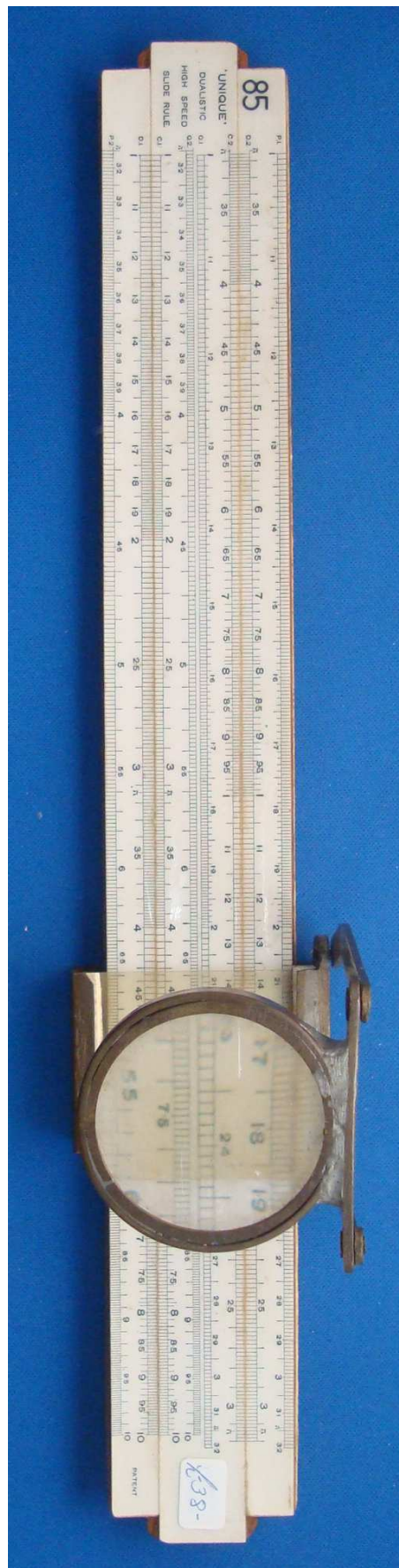


Figure 10: TCD-SCSS-U.20121208.043-fig10

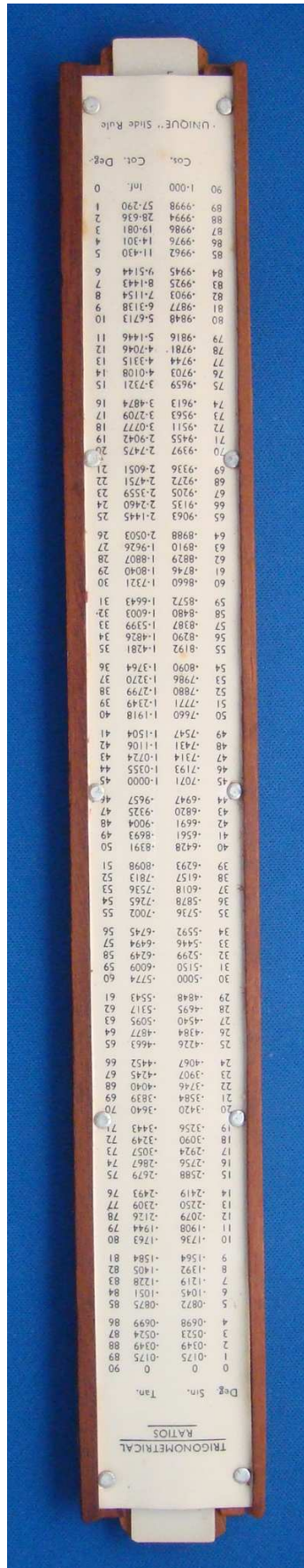


Figure 11: TCD-SCSS-U.20121208.043-fig11

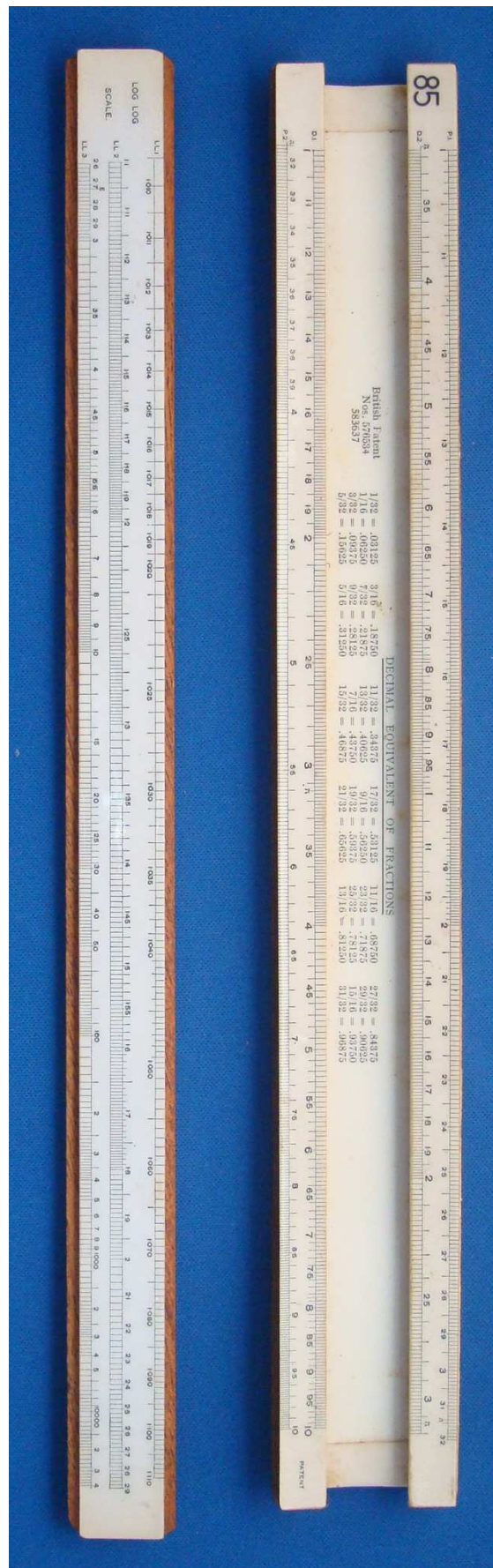


Figure 12: TCD-SCSS-U.20121208.043-fig12

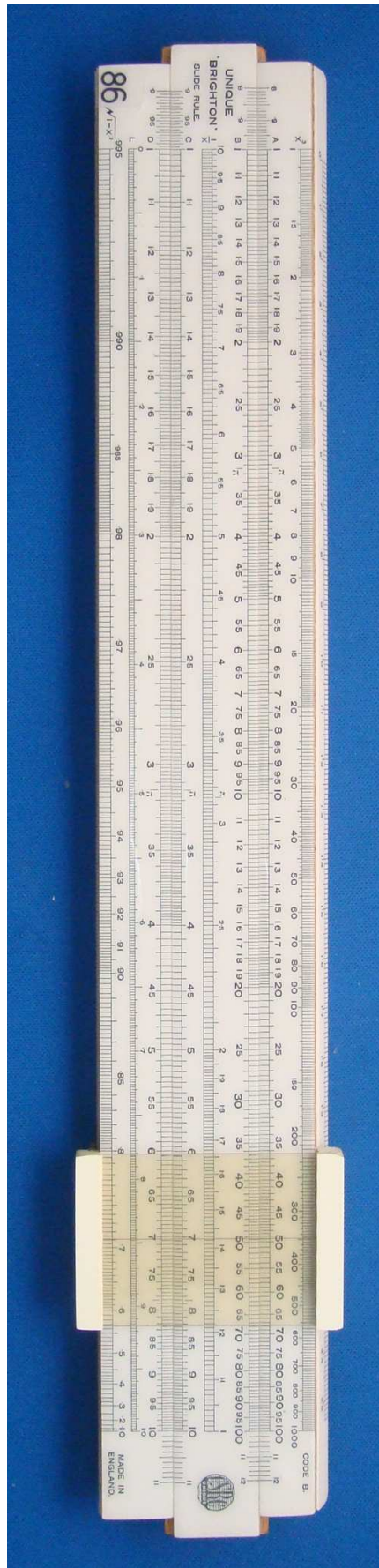


Figure 13: TCD-SCSS-U.20121208.043-fig13

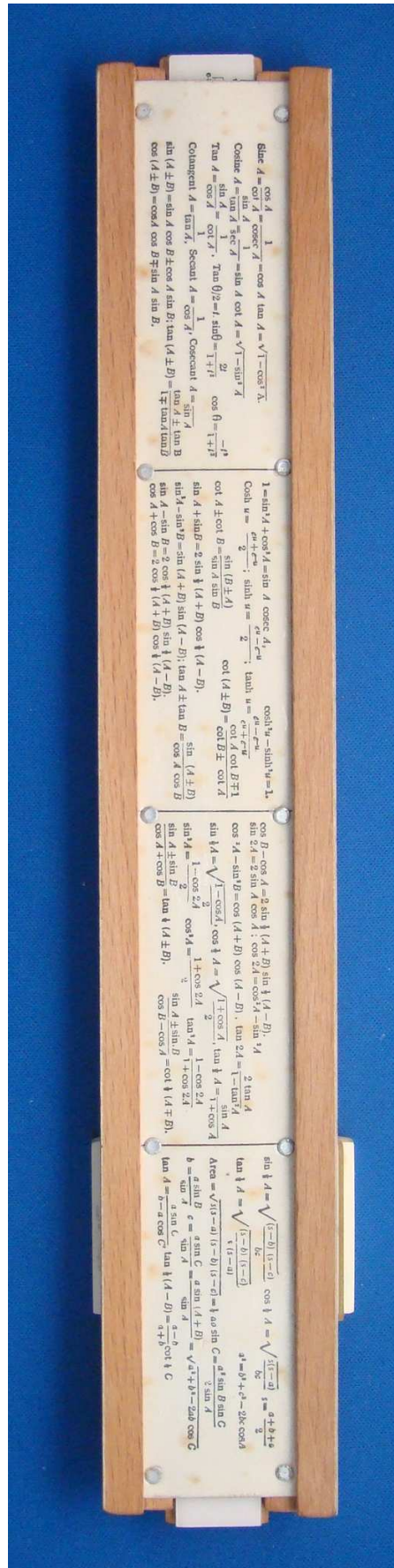


Figure 14: TCD-SCSS-U.20121208.043-fig14

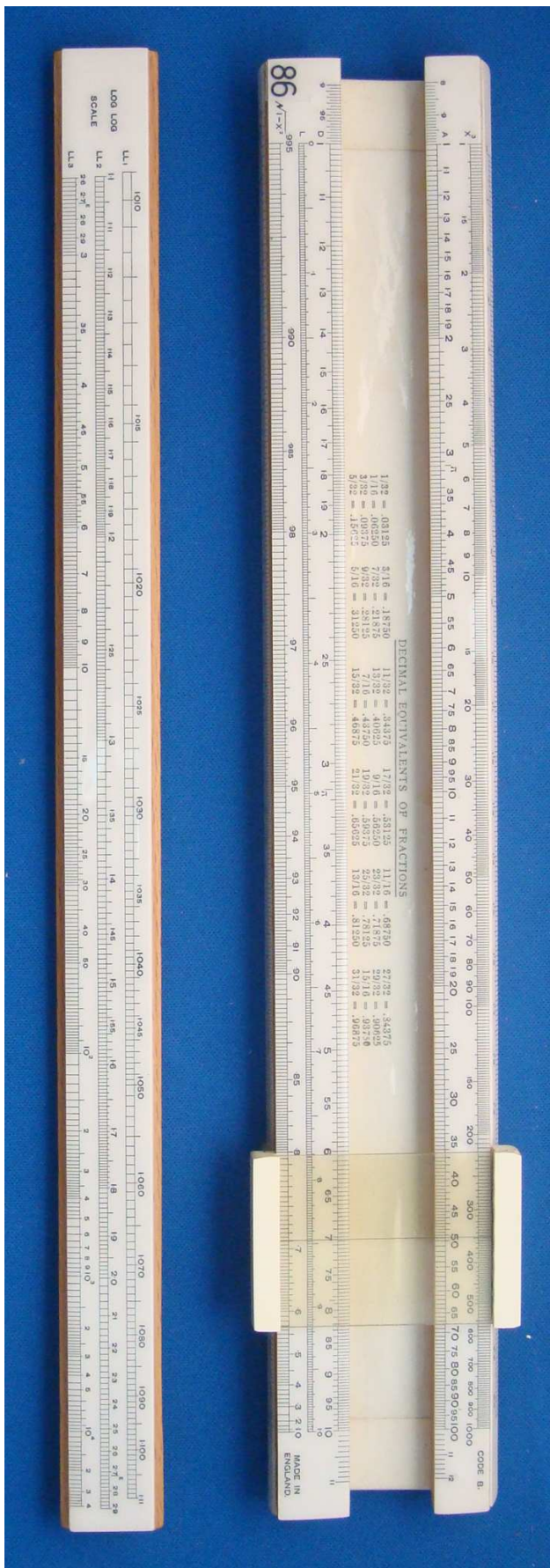


Figure 15: TCD-SCSS-U.20121208.043-fig15

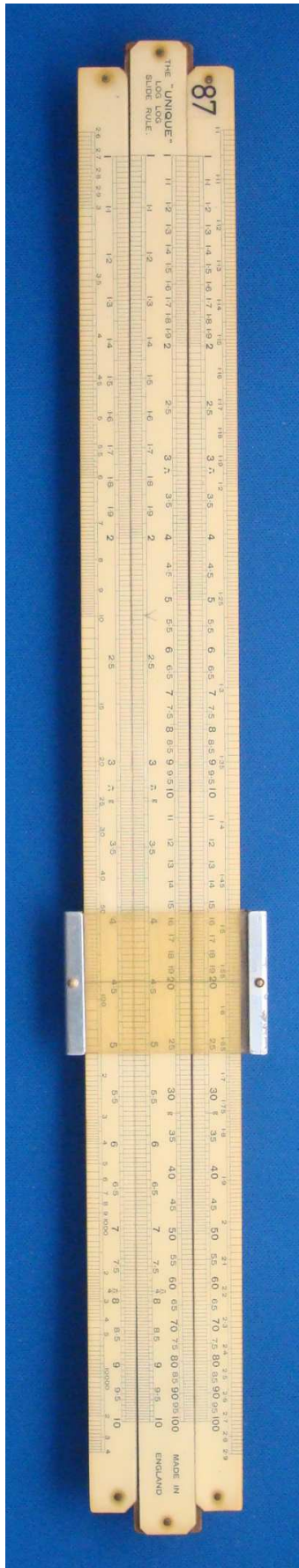


Figure 16: TCD-SCSS-U.20121208.043-fig16

| THE UNIQUE SLIDE RULE. | | |
|---|--------|--------|
| Deg | Sin | Tan |
| 0 | 0 | 0 |
| 1 | .0175 | .0175 |
| 2 | .0349 | .0349 |
| 3 | .0523 | .0524 |
| 4 | .0698 | .0699 |
| 5 | .0872 | .0873 |
| 6 | .1045 | .1051 |
| 7 | .1219 | .1228 |
| 8 | .1392 | .1405 |
| 9 | .1564 | .1584 |
| 10 | .1736 | .1763 |
| 11 | .1908 | .1944 |
| 12 | .2079 | .2126 |
| 13 | .2250 | .2309 |
| 14 | .2419 | .2493 |
| 15 | .2588 | .2679 |
| 16 | .2756 | .2867 |
| 17 | .2924 | .3057 |
| 18 | .3090 | .3214 |
| 19 | .3256 | .3443 |
| 20 | .3420 | .3640 |
| 21 | .3584 | .3859 |
| 22 | .3746 | .4040 |
| 23 | .3907 | .4245 |
| 24 | .4067 | .4462 |
| 25 | .4226 | .4663 |
| 26 | .4384 | .4877 |
| 27 | .4540 | .5095 |
| 28 | .4695 | .5317 |
| 29 | .4848 | .5543 |
| 30 | .5000 | .5774 |
| 31 | .5150 | .6009 |
| 32 | .5299 | .6249 |
| 33 | .5446 | .6494 |
| 34 | .5592 | .6742 |
| 35 | .5736 | .7002 |
| 36 | .5878 | .7265 |
| 37 | .6018 | .7535 |
| 38 | .6157 | .7813 |
| 39 | .6293 | .8098 |
| 40 | .6428 | .8391 |
| 41 | .6561 | .8693 |
| 42 | .6691 | .9004 |
| 43 | .6820 | .9325 |
| 44 | .6947 | .9657 |
| 45 | .7071 | 1.0000 |
| 46 | .7193 | 1.0353 |
| 47 | .7314 | 1.0724 |
| 48 | .7431 | 1.1126 |
| 49 | .7547 | 1.1554 |
| 50 | .7660 | 1.1918 |
| 51 | .7771 | 1.2319 |
| 52 | .7880 | 1.2759 |
| 53 | .7986 | 1.3270 |
| 54 | .8090 | 1.3764 |
| 55 | .8192 | 1.4283 |
| 56 | .8290 | 1.4826 |
| 57 | .8387 | 1.5399 |
| 58 | .8482 | 1.6003 |
| 59 | .8572 | 1.6643 |
| 60 | .8660 | 1.7321 |
| 61 | .8746 | 1.8040 |
| 62 | .8830 | 1.8807 |
| 63 | .8910 | 1.9626 |
| 64 | .8988 | 2.0503 |
| 65 | .9063 | 2.1445 |
| 66 | .9135 | 2.2460 |
| 67 | .9205 | 2.3559 |
| 68 | .9272 | 2.4751 |
| 69 | .9336 | 2.6051 |
| 70 | .9397 | 2.7475 |
| 71 | .9455 | 2.9042 |
| 72 | .9511 | 3.0777 |
| 73 | .9563 | 3.2709 |
| 74 | .9613 | 3.4874 |
| 75 | .9659 | 3.7281 |
| 76 | .9703 | 4.0008 |
| 77 | .9744 | 4.3215 |
| 78 | .9781 | 4.7046 |
| 79 | .9815 | 5.1446 |
| 80 | .9848 | 5.6713 |
| 81 | .9877 | 6.3139 |
| 82 | .9903 | 7.1124 |
| 83 | .9925 | 8.1443 |
| 84 | .9945 | 9.5144 |
| 85 | .9962 | 11.420 |
| 86 | .9976 | 14.001 |
| 87 | .9986 | 17.081 |
| 88 | .9994 | 20.836 |
| 89 | .9998 | 27.290 |
| 90 | 1.0000 | ∞ |
| Trigonometrical Formulas. | | |
| Cosec A = $\frac{1}{\sin A}$ | | |
| Sec A = $\frac{1}{\cos A}$ | | |
| Cot A = $\frac{1}{\tan A}$ | | |
| Tan A = $\frac{\sin A}{\cos A}$ | | |
| Sin 2A = Cos 2A = 1. | | |
| Sec 2A = Tan 2A. | | |
| Cosec 2A = Cot 2A. | | |
| Sin (A+B) = Sin A Cos B + Cos A Sin B. | | |
| Cos (A+B) = Cos A Cos B - Sin A Sin B. | | |
| Tan (A+B) = $\frac{\tan A + \tan B}{1 - \tan A \tan B}$ | | |
| Sin 2A = 2 Sin A Cos A | | |
| Cos 2A = 2 Cos ² A - 1 | | |
| = 1 - 2 Sin ² A. | | |
| Tan 2A = $\frac{2 \tan A}{1 - \tan^2 A}$. | | |
| a+b+c=2s. A+B+C=180°. | | |
| $\frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}$ | | |
| a = b cos C + c cos B. | | |
| Cos A = $\frac{b^2 + c^2 - a^2}{2bc}$ | | |
| Sin $\frac{A}{2} = \sqrt{\frac{(s-b)(s-c)}{bc}}$ | | |
| Cos $\frac{A}{2} = \sqrt{\frac{s(s-a)}{bc}}$ | | |
| Tan $\frac{A}{2} = \sqrt{\frac{(s-b)(s-c)}{s(s-a)}}$ | | |
| Sin $\frac{A}{2} = \sqrt{\frac{bc(1-\cos A)}{b^2 + c^2 - a^2}}$ | | |
| Area $\Delta = \frac{1}{2} bc \sin A$ | | |
| = $\frac{1}{2} a(b \sin C + c \sin B)$ | | |
| Copyright. | | |

Figure 17: TCD-SCSS-U.20121208.043-fig17

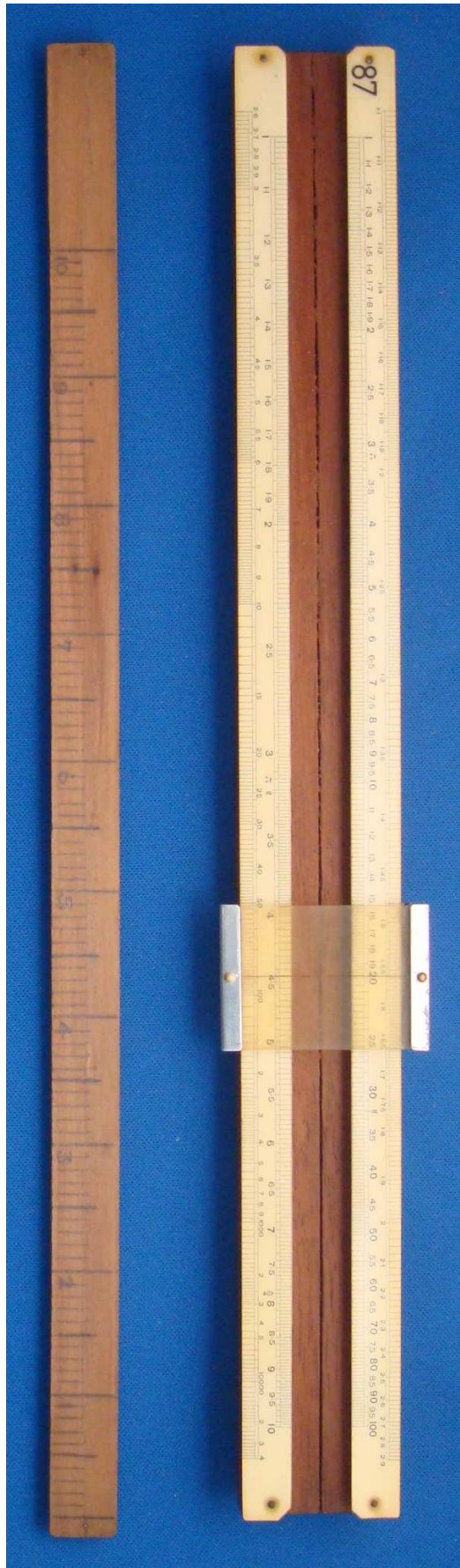


Figure 18: TCD-SCSS-U.20121208.043-fig18

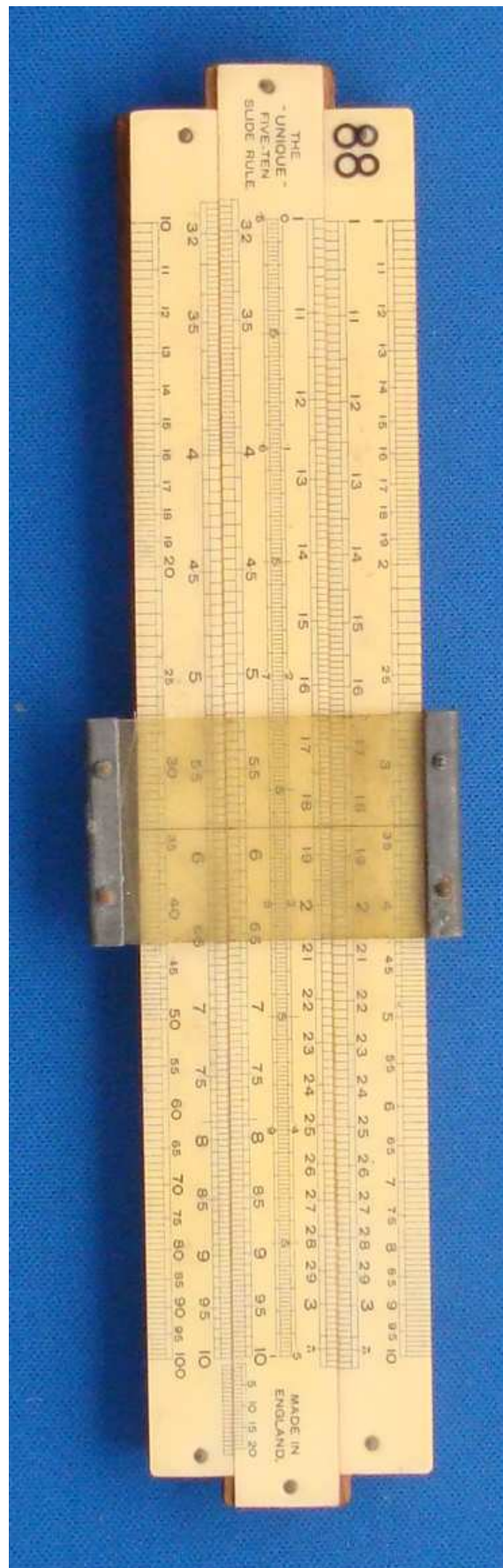


Figure 19: TCD-SCSS-U.20121208.043-fig19

| TRIPOGRAPHICAL | | |
|----------------|--------|-------|
| DEG. | MIN. | SEC. |
| 0 | 0 | 0 |
| 1 | 0.175 | 0.075 |
| 2 | 0.350 | 0.150 |
| 3 | 0.525 | 0.225 |
| 4 | 0.700 | 0.300 |
| 5 | 0.875 | 0.375 |
| 6 | 1.050 | 0.450 |
| 7 | 1.225 | 0.525 |
| 8 | 1.400 | 0.600 |
| 9 | 1.575 | 0.675 |
| 10 | 1.750 | 0.750 |
| 11 | 1.925 | 0.825 |
| 12 | 2.100 | 0.900 |
| 13 | 2.275 | 0.975 |
| 14 | 2.450 | 1.050 |
| 15 | 2.625 | 1.125 |
| 16 | 2.800 | 1.200 |
| 17 | 2.975 | 1.275 |
| 18 | 3.150 | 1.350 |
| 19 | 3.325 | 1.425 |
| 20 | 3.500 | 1.500 |
| 21 | 3.675 | 1.575 |
| 22 | 3.850 | 1.650 |
| 23 | 4.025 | 1.725 |
| 24 | 4.200 | 1.800 |
| 25 | 4.375 | 1.875 |
| 26 | 4.550 | 1.950 |
| 27 | 4.725 | 2.025 |
| 28 | 4.900 | 2.100 |
| 29 | 5.075 | 2.175 |
| 30 | 5.250 | 2.250 |
| 31 | 5.425 | 2.325 |
| 32 | 5.600 | 2.400 |
| 33 | 5.775 | 2.475 |
| 34 | 5.950 | 2.550 |
| 35 | 6.125 | 2.625 |
| 36 | 6.300 | 2.700 |
| 37 | 6.475 | 2.775 |
| 38 | 6.650 | 2.850 |
| 39 | 6.825 | 2.925 |
| 40 | 7.000 | 3.000 |
| 41 | 7.175 | 3.075 |
| 42 | 7.350 | 3.150 |
| 43 | 7.525 | 3.225 |
| 44 | 7.700 | 3.300 |
| 45 | 7.875 | 3.375 |
| 46 | 8.050 | 3.450 |
| 47 | 8.225 | 3.525 |
| 48 | 8.400 | 3.600 |
| 49 | 8.575 | 3.675 |
| 50 | 8.750 | 3.750 |
| 51 | 8.925 | 3.825 |
| 52 | 9.100 | 3.900 |
| 53 | 9.275 | 3.975 |
| 54 | 9.450 | 4.050 |
| 55 | 9.625 | 4.125 |
| 56 | 9.800 | 4.200 |
| 57 | 9.975 | 4.275 |
| 58 | 10.150 | 4.350 |
| 59 | 10.325 | 4.425 |
| 60 | 10.500 | 4.500 |
| 61 | 10.675 | 4.575 |
| 62 | 10.850 | 4.650 |
| 63 | 11.025 | 4.725 |
| 64 | 11.200 | 4.800 |
| 65 | 11.375 | 4.875 |
| 66 | 11.550 | 4.950 |
| 67 | 11.725 | 5.025 |
| 68 | 11.900 | 5.100 |
| 69 | 12.075 | 5.175 |
| 70 | 12.250 | 5.250 |
| 71 | 12.425 | 5.325 |
| 72 | 12.600 | 5.400 |
| 73 | 12.775 | 5.475 |
| 74 | 12.950 | 5.550 |
| 75 | 13.125 | 5.625 |
| 76 | 13.300 | 5.700 |
| 77 | 13.475 | 5.775 |
| 78 | 13.650 | 5.850 |
| 79 | 13.825 | 5.925 |
| 80 | 14.000 | 6.000 |
| 81 | 14.175 | 6.075 |
| 82 | 14.350 | 6.150 |
| 83 | 14.525 | 6.225 |
| 84 | 14.700 | 6.300 |
| 85 | 14.875 | 6.375 |
| 86 | 15.050 | 6.450 |
| 87 | 15.225 | 6.525 |
| 88 | 15.400 | 6.600 |
| 89 | 15.575 | 6.675 |
| 90 | 15.750 | 6.750 |

Figure 20: TCD-SCSS-U.20121208.043-fig20

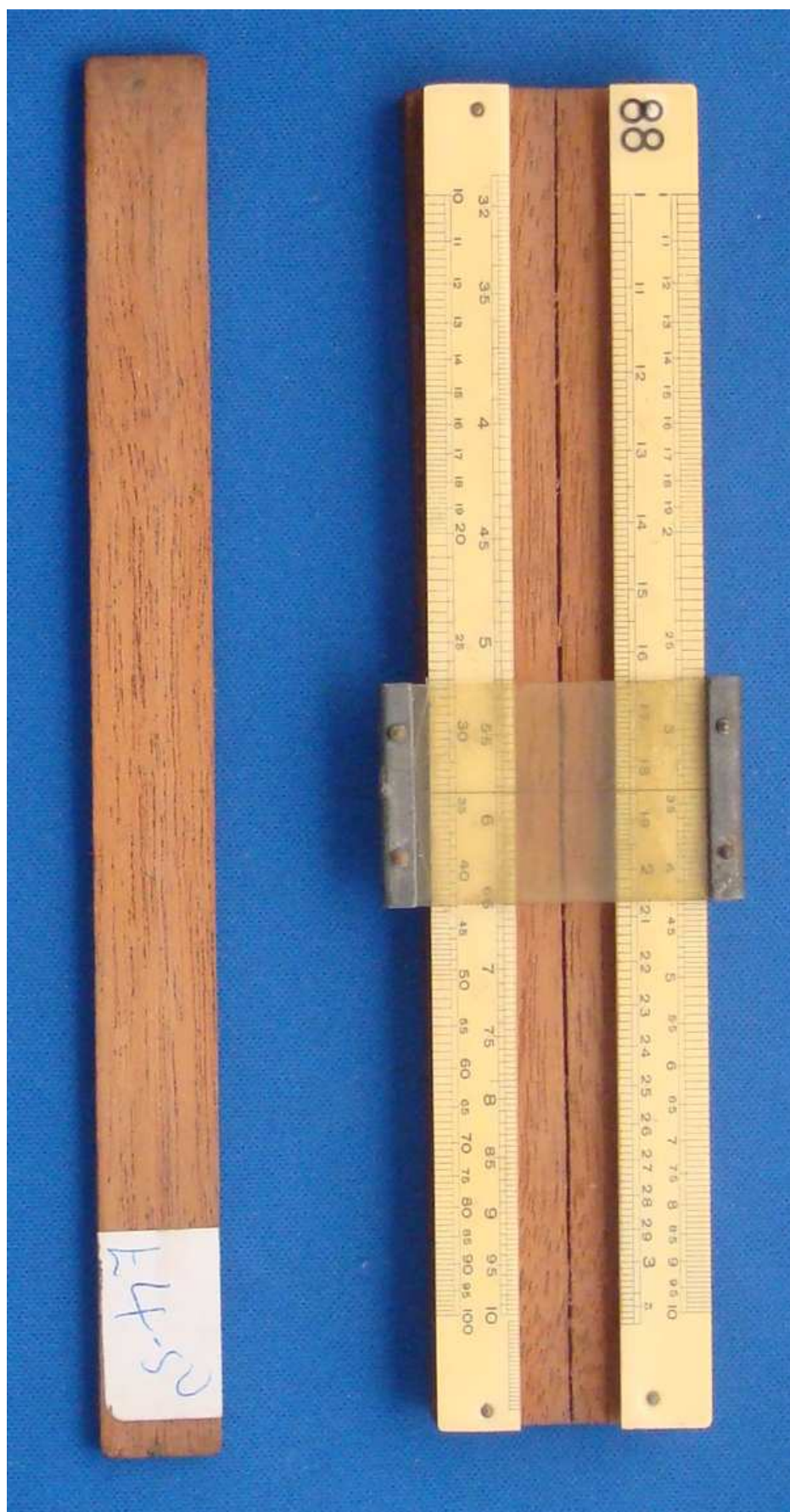


Figure 21: TCD-SCSS-U.20121208.043-fig21

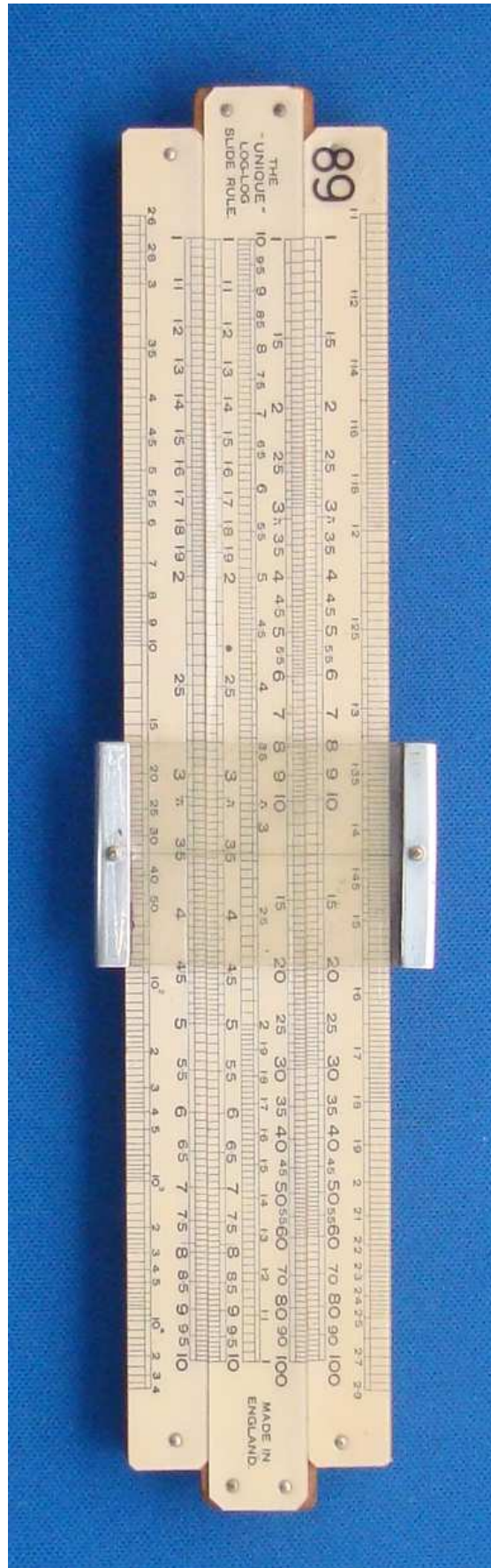


Figure 22: TCD-SCSS-U.20121208.043-fig22

| TRIGONOMETRICAL TABLE | | | |
|-----------------------|--------|-------|------|
| Log. | Sin. | Tan. | Log. |
| 90 | 0 | 0 | 90 |
| 1 | .0175 | .0175 | 89 |
| 2 | .0349 | .0349 | 88 |
| 3 | .0523 | .0523 | 87 |
| 4 | .0697 | .0697 | 86 |
| 5 | .0875 | .0875 | 85 |
| 6 | .1051 | .1051 | 84 |
| 7 | .1228 | .1228 | 83 |
| 8 | .1392 | .1392 | 82 |
| 9 | .1564 | .1564 | 81 |
| 10 | .1735 | .1735 | 80 |
| 11 | .1908 | .1908 | 79 |
| 12 | .2079 | .2079 | 78 |
| 13 | .2250 | .2250 | 77 |
| 14 | .2419 | .2419 | 76 |
| 15 | .2588 | .2588 | 75 |
| 16 | .2756 | .2756 | 74 |
| 17 | .2924 | .2924 | 73 |
| 18 | .3090 | .3090 | 72 |
| 19 | .3256 | .3256 | 71 |
| 20 | .3420 | .3420 | 70 |
| 21 | .3584 | .3584 | 69 |
| 22 | .3746 | .3746 | 68 |
| 23 | .3907 | .3907 | 67 |
| 24 | .4067 | .4067 | 66 |
| 25 | .4226 | .4226 | 65 |
| 26 | .4384 | .4384 | 64 |
| 27 | .4540 | .4540 | 63 |
| 28 | .4695 | .4695 | 62 |
| 29 | .4848 | .4848 | 61 |
| 30 | .5000 | .5000 | 60 |
| 31 | .5150 | .5150 | 59 |
| 32 | .5299 | .5299 | 58 |
| 33 | .5446 | .5446 | 57 |
| 34 | .5592 | .5592 | 56 |
| 35 | .5736 | .5736 | 55 |
| 36 | .5878 | .5878 | 54 |
| 37 | .6018 | .6018 | 53 |
| 38 | .6157 | .6157 | 52 |
| 39 | .6293 | .6293 | 51 |
| 40 | .6428 | .6428 | 50 |
| 41 | .6561 | .6561 | 49 |
| 42 | .6691 | .6691 | 48 |
| 43 | .6820 | .6820 | 47 |
| 44 | .6947 | .6947 | 46 |
| 45 | .7071 | .7071 | 45 |
| 46 | .7193 | .7193 | 44 |
| 47 | .7314 | .7314 | 43 |
| 48 | .7431 | .7431 | 42 |
| 49 | .7547 | .7547 | 41 |
| 50 | .7660 | .7660 | 40 |
| 51 | .7771 | .7771 | 39 |
| 52 | .7880 | .7880 | 38 |
| 53 | .7986 | .7986 | 37 |
| 54 | .8090 | .8090 | 36 |
| 55 | .8192 | .8192 | 35 |
| 56 | .8290 | .8290 | 34 |
| 57 | .8387 | .8387 | 33 |
| 58 | .8480 | .8480 | 32 |
| 59 | .8572 | .8572 | 31 |
| 60 | .8660 | .8660 | 30 |
| 61 | .8746 | .8746 | 29 |
| 62 | .8829 | .8829 | 28 |
| 63 | .8910 | .8910 | 27 |
| 64 | .8988 | .8988 | 26 |
| 65 | .9063 | .9063 | 25 |
| 66 | .9135 | .9135 | 24 |
| 67 | .9205 | .9205 | 23 |
| 68 | .9272 | .9272 | 22 |
| 69 | .9336 | .9336 | 21 |
| 70 | .9397 | .9397 | 20 |
| 71 | .9455 | .9455 | 19 |
| 72 | .9511 | .9511 | 18 |
| 73 | .9563 | .9563 | 17 |
| 74 | .9613 | .9613 | 16 |
| 75 | .9659 | .9659 | 15 |
| 76 | .9703 | .9703 | 14 |
| 77 | .9744 | .9744 | 13 |
| 78 | .9781 | .9781 | 12 |
| 79 | .9816 | .9816 | 11 |
| 80 | .9848 | .9848 | 10 |
| 81 | .9877 | .9877 | 9 |
| 82 | .9903 | .9903 | 8 |
| 83 | .9925 | .9925 | 7 |
| 84 | .9943 | .9943 | 6 |
| 85 | .9958 | .9958 | 5 |
| 86 | .9970 | .9970 | 4 |
| 87 | .9980 | .9980 | 3 |
| 88 | .9988 | .9988 | 2 |
| 89 | .9994 | .9994 | 1 |
| 90 | 1.0000 | Inf. | 0 |

Figure 23: TCD-SCSS-U.20121208.043-fig23



Figure 24: TCD-SCSS-U.20121208.043-fig24

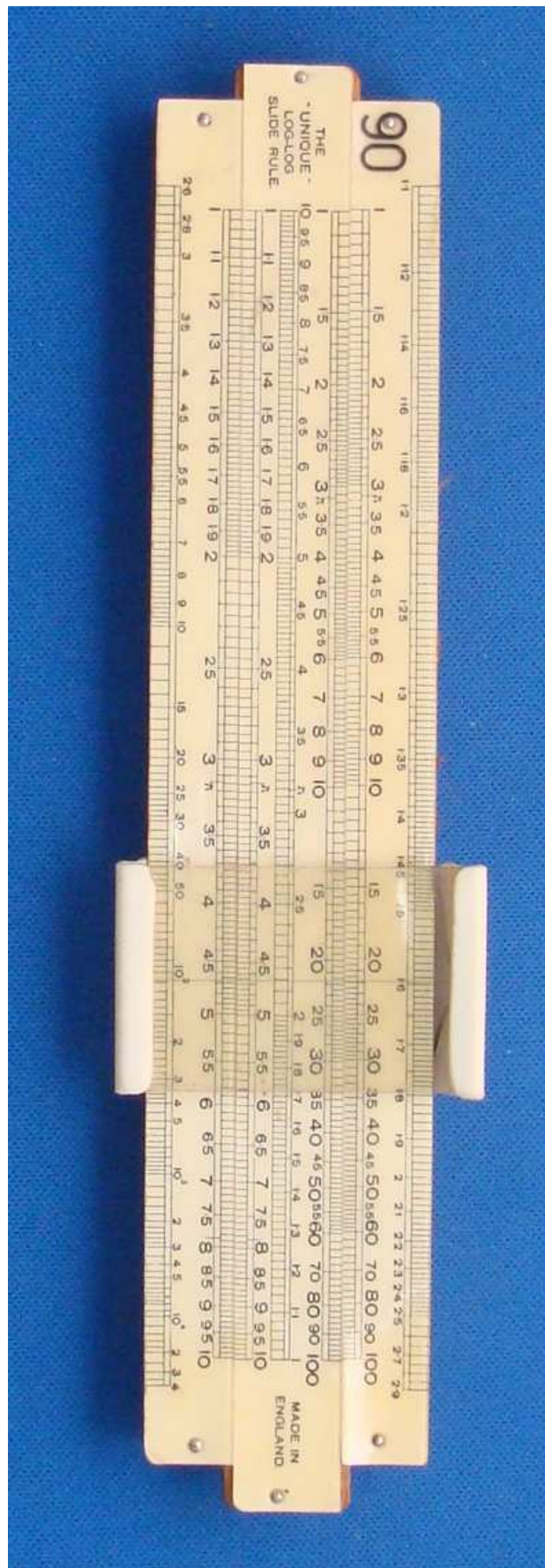


Figure 25: TCD-SCSS-U.20121208.043-fig25

| TRIGONOMETRICAL RATIOS. | | | |
|-------------------------|-------|---------|----|
| Deg. | Sin. | Tan. | |
| 0 | 0 | 0 | 90 |
| 1 | .0175 | .0175 | 89 |
| 2 | .0349 | .0349 | 88 |
| 3 | .0523 | .0524 | 87 |
| 4 | .0698 | .0699 | 86 |
| 5 | .0872 | .0875 | 85 |
| 6 | .1045 | .1051 | 84 |
| 7 | .1219 | .1228 | 83 |
| 8 | .1392 | .1405 | 82 |
| 9 | .1564 | .1584 | 81 |
| 10 | .1736 | .1763 | 80 |
| 11 | .1908 | .1944 | 79 |
| 12 | .2079 | .2126 | 78 |
| 13 | .2250 | .2309 | 77 |
| 14 | .2419 | .2493 | 76 |
| 15 | .2588 | .2679 | 75 |
| 16 | .2756 | .2867 | 74 |
| 17 | .2924 | .3057 | 73 |
| 18 | .3090 | .3249 | 72 |
| 19 | .3256 | .3443 | 71 |
| 20 | .3420 | .3640 | 70 |
| 21 | .3584 | .3839 | 69 |
| 22 | .3746 | .4040 | 68 |
| 23 | .3907 | .4245 | 67 |
| 24 | .4067 | .4452 | 66 |
| 25 | .4226 | .4663 | 65 |
| 26 | .4384 | .4877 | 64 |
| 27 | .4540 | .5095 | 63 |
| 28 | .4695 | .5317 | 62 |
| 29 | .4848 | .5543 | 61 |
| 30 | .5000 | .5774 | 60 |
| 31 | .5150 | .6009 | 59 |
| 32 | .5299 | .6249 | 58 |
| 33 | .5446 | .6494 | 57 |
| 34 | .5592 | .6745 | 56 |
| 35 | .5736 | .7002 | 55 |
| 36 | .5878 | .7265 | 54 |
| 37 | .6018 | .7536 | 53 |
| 38 | .6157 | .7813 | 52 |
| 39 | .6293 | .8098 | 51 |
| 40 | .6428 | .8391 | 50 |
| 41 | .6561 | .8693 | 49 |
| 42 | .6691 | .8904 | 48 |
| 43 | .6820 | .9125 | 47 |
| 44 | .6947 | .9357 | 46 |
| 45 | .7071 | 1.0000 | 45 |
| 46 | .7193 | 1.0355 | 44 |
| 47 | .7314 | 1.0724 | 43 |
| 48 | .7431 | 1.1106 | 42 |
| 49 | .7547 | 1.1504 | 41 |
| 50 | .7660 | 1.1918 | 40 |
| 51 | .7771 | 1.2349 | 39 |
| 52 | .7880 | 1.2799 | 38 |
| 53 | .7986 | 1.3270 | 37 |
| 54 | .8090 | 1.3764 | 36 |
| 55 | .8192 | 1.4281 | 35 |
| 56 | .8290 | 1.4826 | 34 |
| 57 | .8387 | 1.5399 | 33 |
| 58 | .8480 | 1.6003 | 32 |
| 59 | .8572 | 1.6643 | 31 |
| 60 | .8660 | 1.7321 | 30 |
| 61 | .8746 | 1.8040 | 29 |
| 62 | .8829 | 1.8807 | 28 |
| 63 | .8910 | 1.9626 | 27 |
| 64 | .8988 | 2.0503 | 26 |
| 65 | .9063 | 2.1445 | 25 |
| 66 | .9135 | 2.2460 | 24 |
| 67 | .9205 | 2.3559 | 23 |
| 68 | .9272 | 2.4751 | 22 |
| 69 | .9336 | 2.6051 | 21 |
| 70 | .9397 | 2.7475 | 20 |
| 71 | .9455 | 2.9042 | 19 |
| 72 | .9511 | 3.0777 | 18 |
| 73 | .9563 | 3.2709 | 17 |
| 74 | .9613 | 3.4874 | 16 |
| 75 | .9659 | 3.7321 | 15 |
| 76 | .9703 | 4.0105 | 14 |
| 77 | .9744 | 4.3315 | 13 |
| 78 | .9781 | 4.7046 | 12 |
| 79 | .9816 | 5.1446 | 11 |
| 80 | .9848 | 5.6713 | 10 |
| 81 | .9877 | 6.3138 | 9 |
| 82 | .9903 | 7.1154 | 8 |
| 83 | .9925 | 8.1443 | 7 |
| 84 | .9945 | 9.5144 | 6 |
| 85 | .9962 | 11.4350 | 5 |
| 86 | .9976 | 14.301 | 4 |
| 87 | .9986 | 19.081 | 3 |
| 88 | .9994 | 26.636 | 2 |
| 89 | .9998 | 57.290 | 1 |
| 90 | 1.000 | Inf. | 0 |
| Cor. | Cor. | Cor. | |
| "UNIQUE" Slide Rule. | | | |

Figure 26: TCD-SCSS-U.20121208.043-fig26

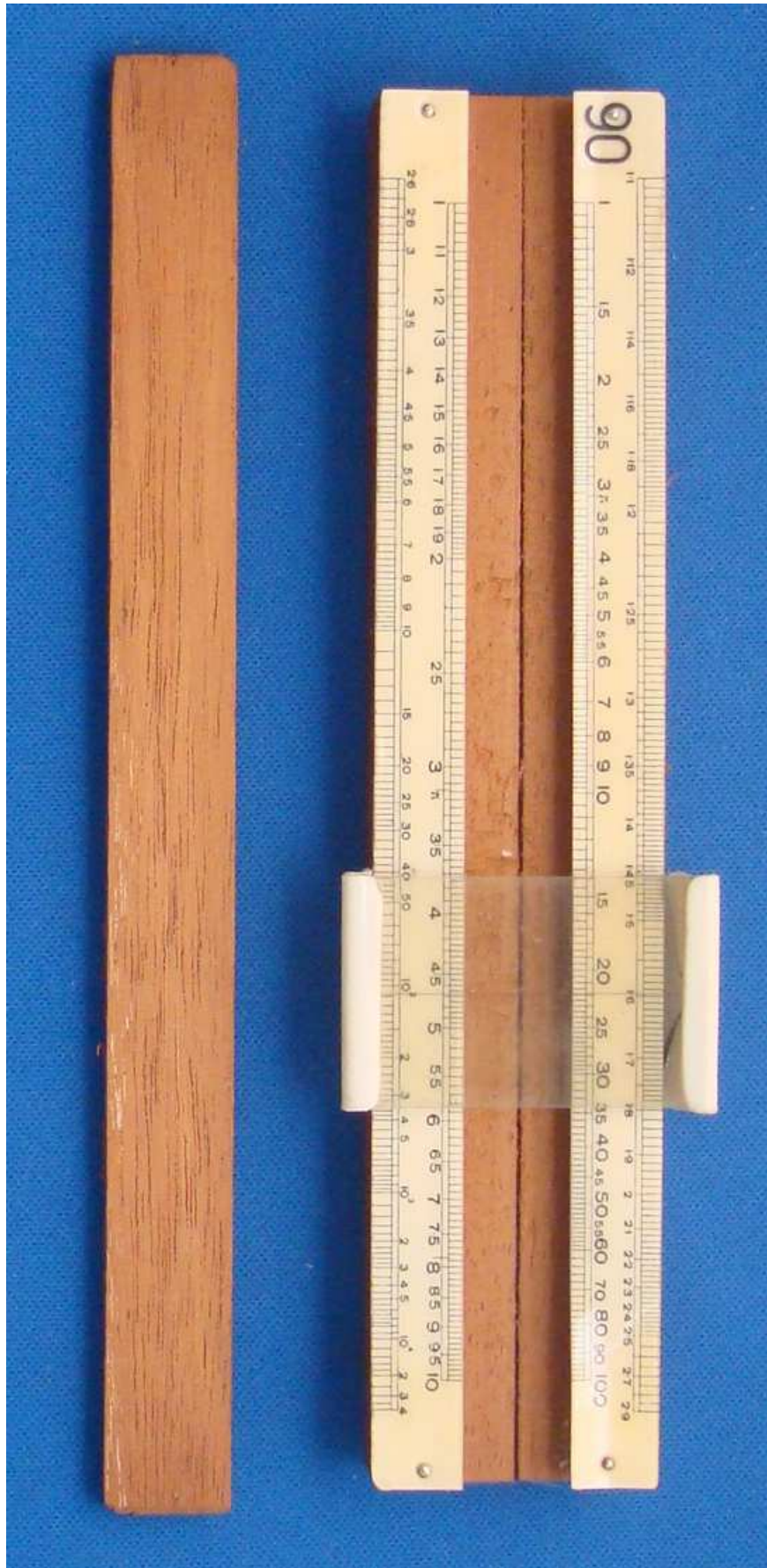


Figure 27: TCD-SCSS-U.20121208.043-fig27

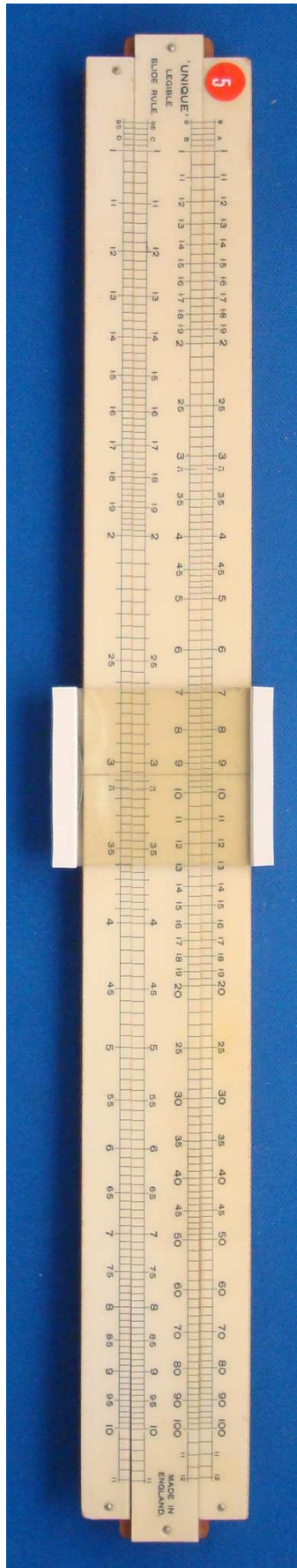


Figure 28: TCD-SCSS-U.20121208.043-fig28