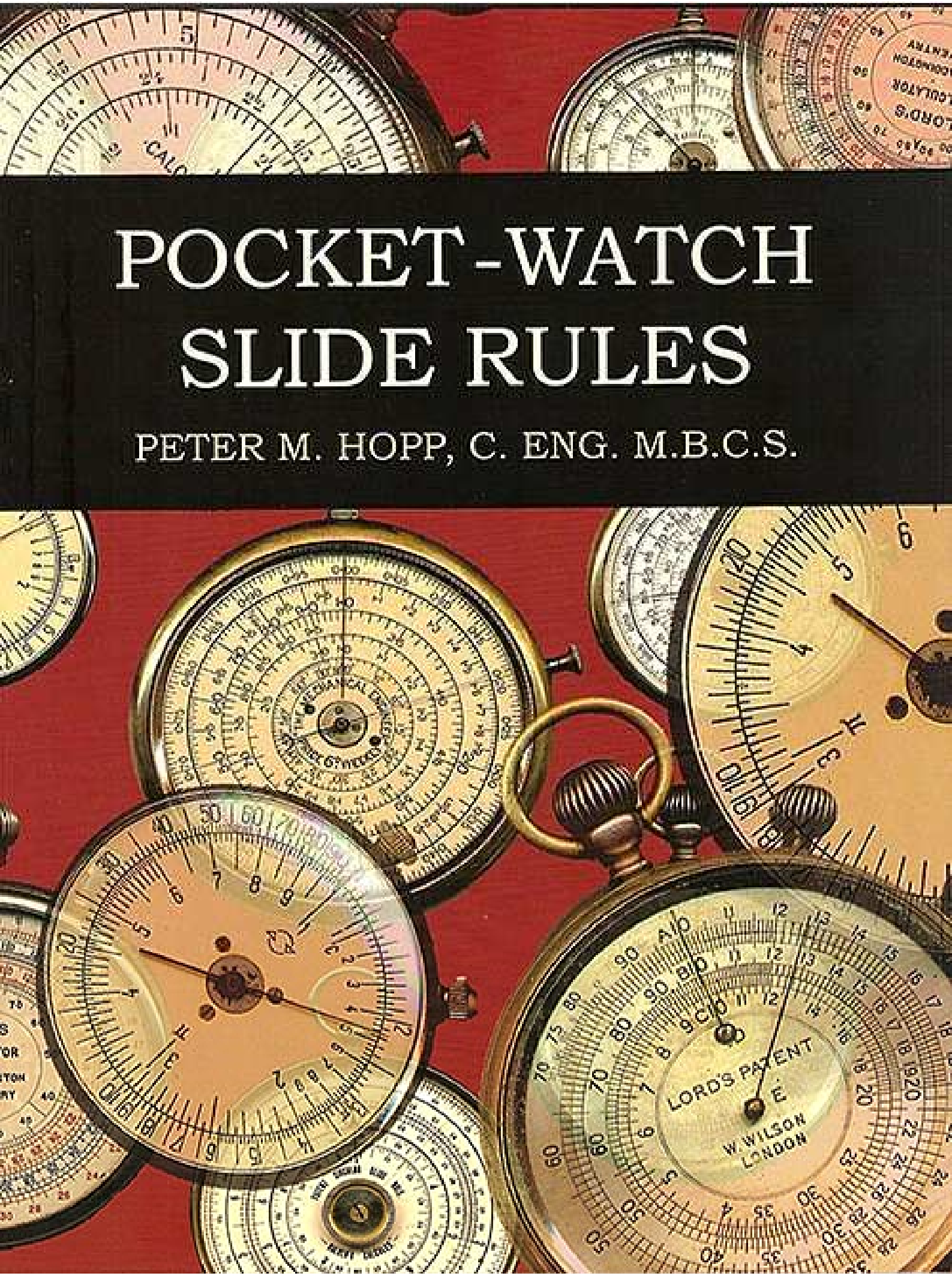

POCKET-WATCH SLIDE RULES

PETER M. HOPP, C. ENG. M.B.C.S.

Russian Pocket-Watch Calculators

Introduction

Russian Pocket-Watch calculators all appear to have the same unknown manufacturing parentage, and have then been retailed by a number of different organizations in the former Soviet Union, which might have included the manufacturer. I am not aware of a definitive work on the various logos; the most comprehensive to date by Colin Barnes[32] has been used to give the information on maker/retailer in the examples below.

Russian Pocket-Watch calculators, which generally seem to carry the type number KL-1, work in much the same way as any other. Each of the two winders drives a different feature of the calculator. In my 'Sunrise' example the winder with the black 'pip', which is directly above the fixed hairline, rotates the front (with logo) scale and the winder with red 'pip' rotates the two pointers, the front one being red, the back one being black, though from the pictures it can be seen that most examples seem to have red pointers on both sides. A translation of the instruction leaflet is included in Appendix 1.

The front face generally carries an outer 'A' scale and an inner 'C' scale and carries a 'π' gauge point. The obverse has an outer 'C' scale with a 'π' gauge point, an adjacent sine scale, and a nearly 2-turn spiral tangent scale marked 'T'. Some versions of the Sunrise variant are described as having light-brown faces. Whether this is true or is fading, is up to you to decide!

Types of Calculators

All calculators which have included an instruction leaflet carry a date in the late 1950's and the 1960's. However the Russian 'Matsku' version is so called from the logo shown on the calculator in Figure 15.1. This has been suggested as a Moscow factory mark.

Figure 15.1: Russian 'Matsku' Calculator

Matsku appear to have been the most prolific maker with several variants noted, as illustrated below. They also made a version of perpetual calendar for 1969 to 1990 using the same case and only a single winder. One of these examples appears to be an earlier design. Sadly the chronology is not known.

This looks to be a variant of the 'Matsku' device and appears the have a slightly different logo (but this is marginal) and a rotating set of center scales and additional different scales.

The front has 'C'/ 'D', 'A' and a mantissa scale, the back has an 'A' scale and very prominent red trigonometric scale markings, with red sine values and a sine, tangent and sine/tan central scale.

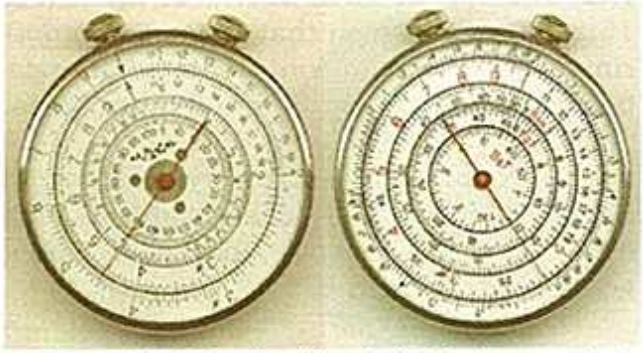

Figure 15.2: Russian 'Matsku' Calculator variant

32 'Some notes on Rules from the Former Soviet Union' Colin Barnes, Journal of the Oughtred Society, Vol. 7, No 2, Fall 1998. Pg 13.

Another version has a logo of two arrows chasing each other round a circle. According to Barnes, this rule is designated as KL-1 from the 'Organization for Technical Demand' in Moscow, with the trade name 'Sunrise'. Some versions of the Sunrise variant are described as having light-brown faces. Whether this is true, or is fading of the scales, is up to you the reader to decide!

Figure 15.3: Russian 'Sunrise' Calculator

A very similar rule is known to have come from a plant in Oberwolga (Overvolga), another dated 1964 from factory 'Vladimar-7'.

Krougovaia Logarifmioueskaia Model Lineikaia KL-1. This is a variant of the circular arrows 'Sunrise' logo seen above with an additional 'ueha3p10k' (price 3 rouble 10 kopek) marking underneath.

Another has been seen with the note 'Moscow "Kontrolpribor"' (Moscow Control device).

Yet another dated 1968 is from 'The Technical Organisation Rassret', at 8 Octriavakava Street, Moscow A-57.

All of these slide rules are generally supplied in a plastic 'pill-box' case which comes in many different colors, this version being yellow. These seem to have taken the brunt of all knocks in the various examples I have seen, and in many cases are either very battered or missing entirely.

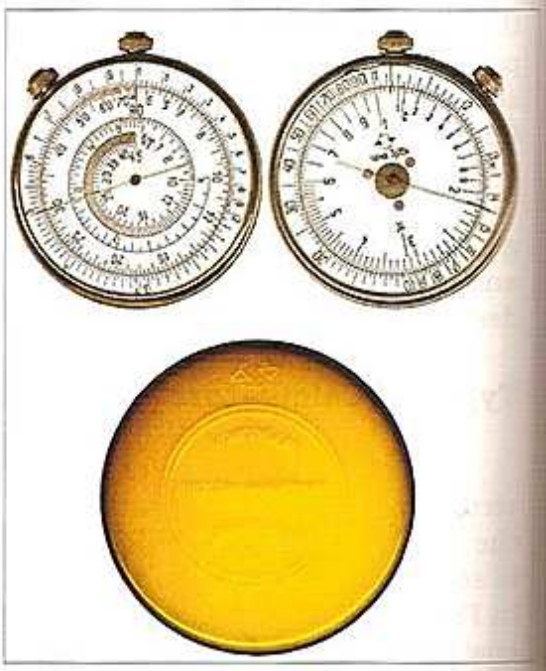

Figure 15.4: Russian KL-1 Calculator

Some examples were also supplied in quite a sturdy cardboard box.

The third variant is undoubtedly an earlier version of these calculators, exemplified by the different knobs and a pointer with circle on the end, but with no obvious logo or name (Figure 15.5). IT can be seen that it has a different plastic rim on each side, in contrast to what appears to be a chromed metal rim for all other types.

The scales are also very different, the front has an outer mantissa scale and a 'C' scale, the obverse only a sine scale, marked 'S' and a tangent spiral, marked 'T'.

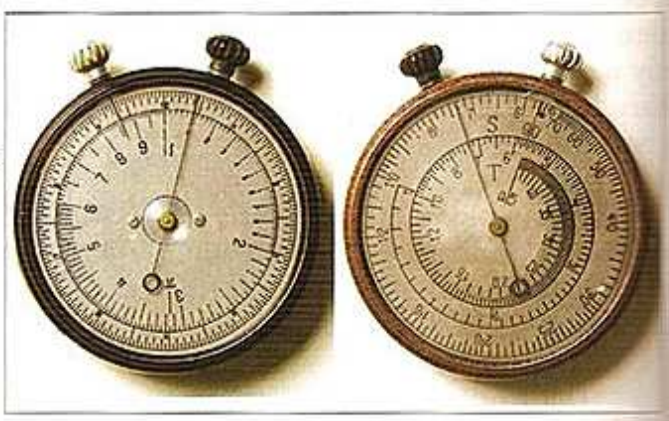

Figure 15.5: Early Russian Calculator

Finally we have a version with a difficult to describe logo (a heart?) which is obviously from the same manufacturer but carries this different logo (Figure 15.6). It may also be a KL-1 and also come from Moscow.

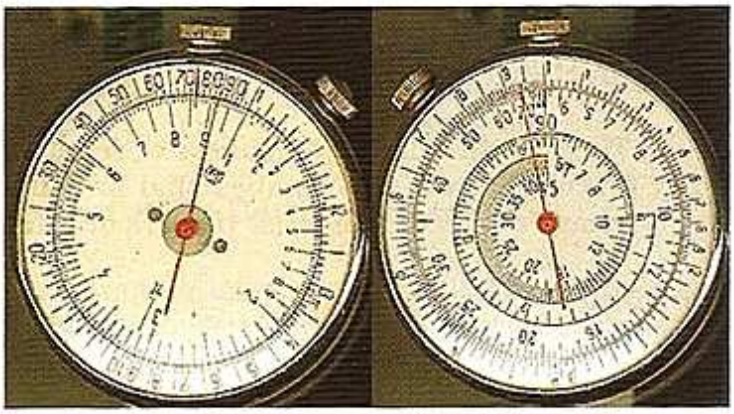

Figure 15.6: Russian 'Heart' Calculator

Other variants seen, particularly on e-Bay where they are commonly and inexpensively available, include one with leather case and where the face of the rule has the dates 1917–1967 on the face as well as what appears to be the tower of the University of Moscow as does the embossed leather case, it is probably an October Revolution commemoration model, see Figure 15.7.

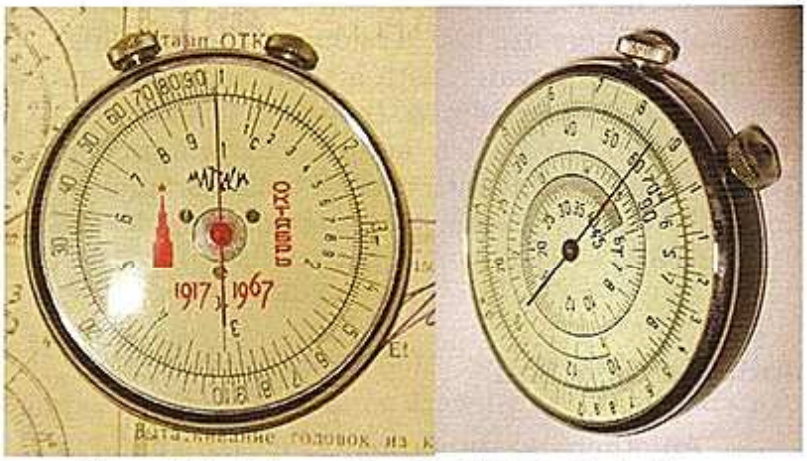

Figure 15.7: Unknown Russian Calculex look-alike

Other examples carry a mixture of marks; the 'heart' and the 'Sunrise' mark on instructions for a 'Matsku' device, but maybe examples and instruction leaflets got mixed up.

There are six Russian 'makers' or 'retailers' shown here, I am sure there must have been others. It would be most interesting to know what other variants may exist, and to see what can be deciphered from the collection of images of the instruction leaflets I have managed to collect.

The excellent translation of the Russian instruction sheet for a KL-1 Pocket-Watch slide rule included at Appendix 1, shows the large range of mathematical calculations which these devices can be used for.

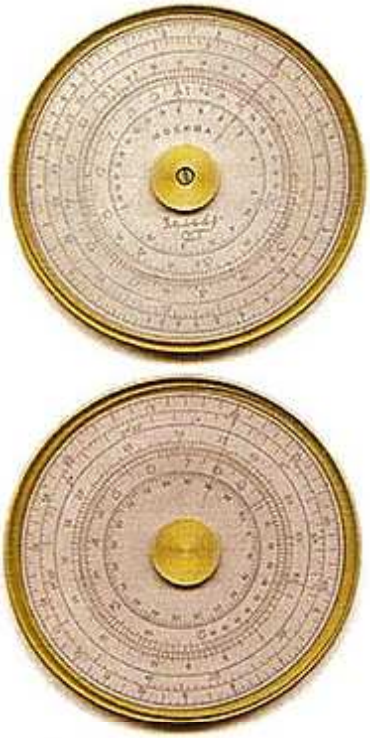

Figure 15.8: Unknown Russian Calculex look-alike

Russian Calculex

This device is totally different to the variants of the KL-1 which precede it, but it is labeled 'Moscow' and has another retailers name and another logo as well.

This also does not have a watch loop, nor winders, it is obviously operated by the 'thumb nuts', so really it might be better catalogued under the vest-pocket section, however as it also looks like another copy of a Calculex with its thumb nuts, and is similar to the Rechen-Max device shown in the chapter on 'other' makers later, and it is Russian so here it is catalogued.