

A Transitional K&E 4092-3

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Introduction

During the early months of the 2020 pandemic, I began the task of updating my database of nearly 200 slide rules that I had collected over the years. While scanning through a list I made of the scales found on each rule, I noticed that in the listing one of the four Keuffel and Esser Model 4092-3 slide rules in the collection had its scales in a slightly different order than the other three. At first, I thought it must be a typographical error from my data entry efforts, but when I looked at the four rules again, indeed one was different in a significant way.

A Time of Transition

The outlier in my possession has serial number 64405, and a quick review of the dating of K&E slide rules as compiled by Clark McCoy suggested a date of about 1923.¹ A nice review of the 4092 can be found in the article by Kate Matthews.² Both articles reveal that many changes were being made to this model during this period of time. The original 4092 Log Log Duplex, introduced in about 1909, included the Log Log scales LL1, LL2 and LL3. By about 1915 the scale set was changed to add folded scales, an inverse folded scale, and an LL0 scale, and by about 1922 this new configuration was designated as 4092-3 (and its longer 4092-5 variant). Finally, by about 1925, the K scale was added to the top of the front face of the rule and this improved scale set lasted until this model was ended in about 1937. Three of my 4092-3 rules have this latter scale set. With the new K scale at the top, the K&E labeling and patent numbers were shifted from the top of the rule to the bottom of the rule at the time of this change. Examples of the known scale sets for the 4092-3 are presented in Matthews.³ It should also be noted that the original 4092 in 1909 had its labeling at the bottom of its front face, but was moved to the top of the rule in about 1922 when the scales changed and the “-3” and “-5” designations were beginning to be employed. The introduction of the K scale moved the labeling back to the bottom.

But returning to my outlier, the interesting feature of the slide rule with serial number 64405 is the fact that this *circa* 1923 4092-3 has a K scale located at the bottom of the rule's front face. The K&E labels and patent numbers are found at the top of the rule as in the pre-1925 scale set. The K scale barely fits onto the

rule, appearing as a series of tick marks along the bottom, while there is plenty of white space left at the top. A thin line separates the marks for the L and K scales, similar to the line found between the CIF and CI scales, and between the S and T scales on the back. Patent information is found at the top of the rule, presented as:

PAT. JUN 5.'00 DEC 22.'08 OTHER PAT. PENDING

All of this suggests to me that the rule in question may have been a trial-run or pre-production rule constructed during the transition period between scale sets. Figure 1 shows the left side of the slide rule, with the K scale along the bottom edge of the front face. One can just imagine someone saying, “Let's see if the K scale will fit on the bottom, then we will not have to change anything else.” And the result, shown in Figure 1, certainly could have directed K&E toward the final changes we saw for the post-1925 scale set.

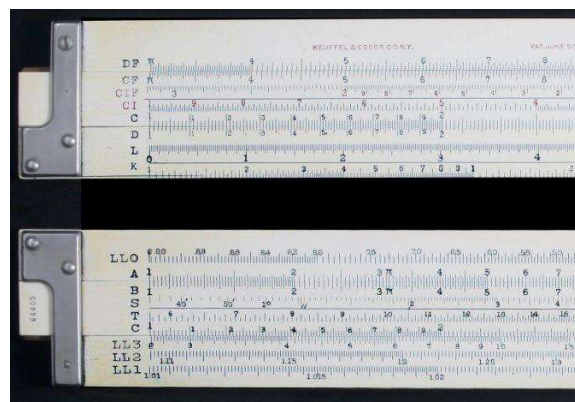


FIGURE 1. Details of the left ends of the K&E transition 4092-3 slide rule. Note the K scale at the bottom of the front face.

This Slide Rule's History

When I purchased the slide rule at an antique shop in Illinois, it came with a K&E sewed leather case typical of the 1920s. On the outside of the case were inscribed two separate names. One name is “Doc McClain”, which is found both on the outside rear of the case and on the inside of the flap. Also, “1925” is found under each instance of this name. Directly below this name on the outside of the case are the initials “JJC”, and a street address for Joliet, Illinois. Presumably JJC is for Joliet Junior College. Historically, JJC was the first

community college created in the United States, formally accredited in 1917.⁴ Notice that the date on the case is consistent with the timing of the switch-over between the 4092-3 scale sets. A separate name, spelled “Haddie Langdon, Notre Dame”, is also etched on the outside front of the case. A search through the JJC yearbooks of the decade 1920-1930 reveal no students with the last name McClain (nor Langdon) nor any close variants. Notably, however, on-line searches reveal that an E.S. McLain was listed as a member of the JJC staff throughout the 1920s, teaching science, accounting and mathematics, and so “Doc McClain” may be referring to the same individual.⁵

Concluding Remarks

Figure 2 is a compilation of our transition slide rule with images of the standard pre- and post-1925 scales superimposed.⁶ While it could have been a “test case”

for the new scale arrangement, or part of a pre-production trial run, it is interesting that this K&E slide rule was sold or even made available to the general public. Perhaps it was actually sold for only a very short period of time. One conjecture by the author was that it may have been a test variant that was donated by K&E, which had a major facility in nearby Chicago, to America’s first community college. In any event, this 4092-3 rule with serial number 64405 has a newly-found special place in my collection as one of those “rare finds”.

Acknowledgements

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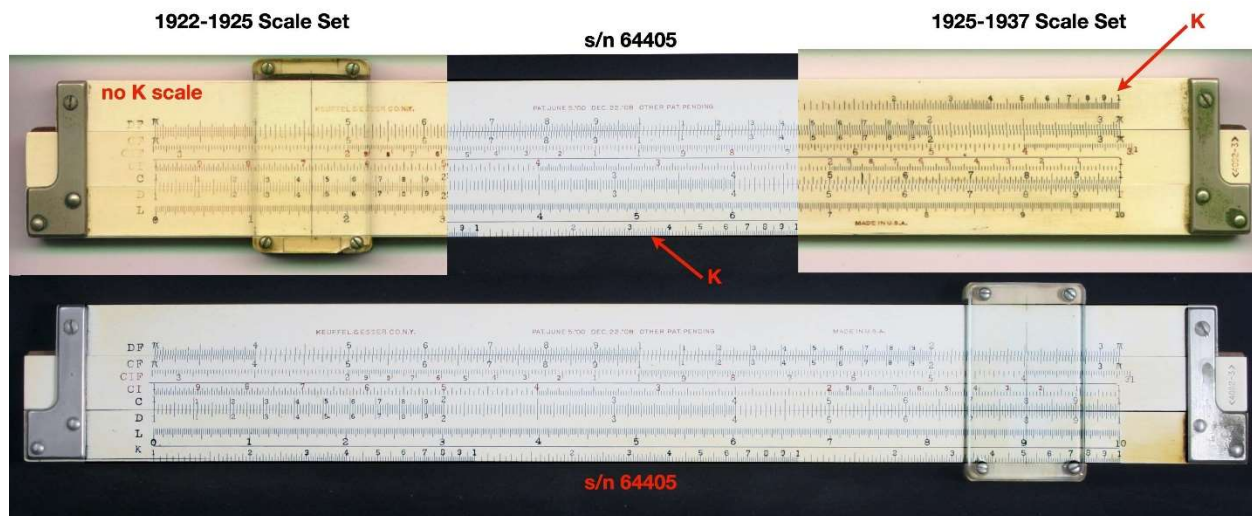


FIGURE 2. The transitional K&E 4092-3, c. 1923.

Notes

1. McCoy, Clark, *Dating K&E Slide Rules*, Journal of the Oughtred Society, 24:2, 2015.
2. Mathews, Kate, *The Evolution of the 4092*, Journal of the Oughtred Society, 10:2, 2001.
3. *Ibid*, p. 54.
4. Wood, Susan H., *The People’s Legacy: A History of Joliet Junior College, 1901-1984*, M&D Printing, Henry, Illinois, 1987.
5. See, for example, *The Commencement Number of The J by the Class of 1925*, Joliet Township High School and Junior College, Joliet Junior College Library, 1925.
6. Superimposed images courtesy of Clark McCoy, www.mccoys-kecatalogs.com