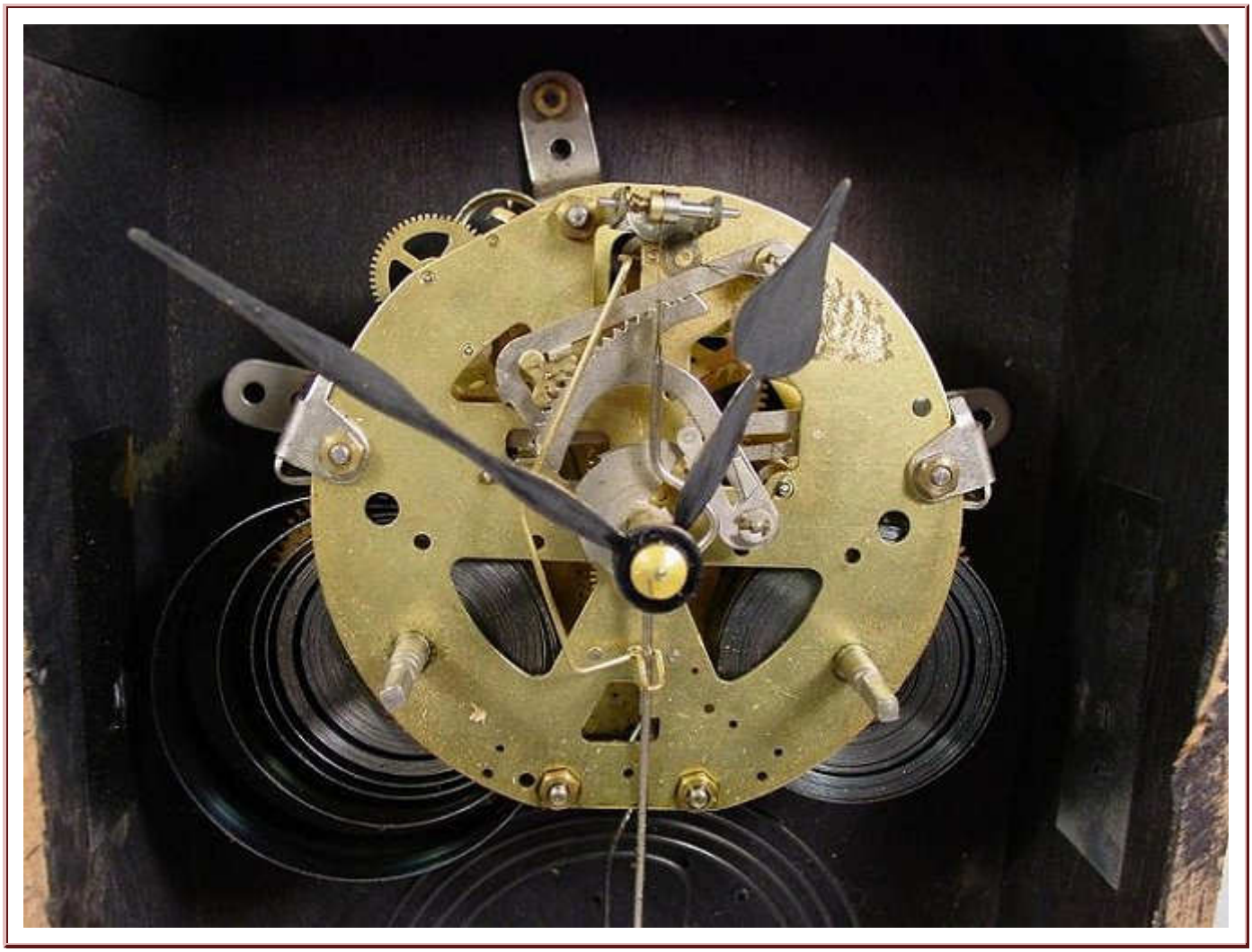
# A Tribute to a Korean Clock

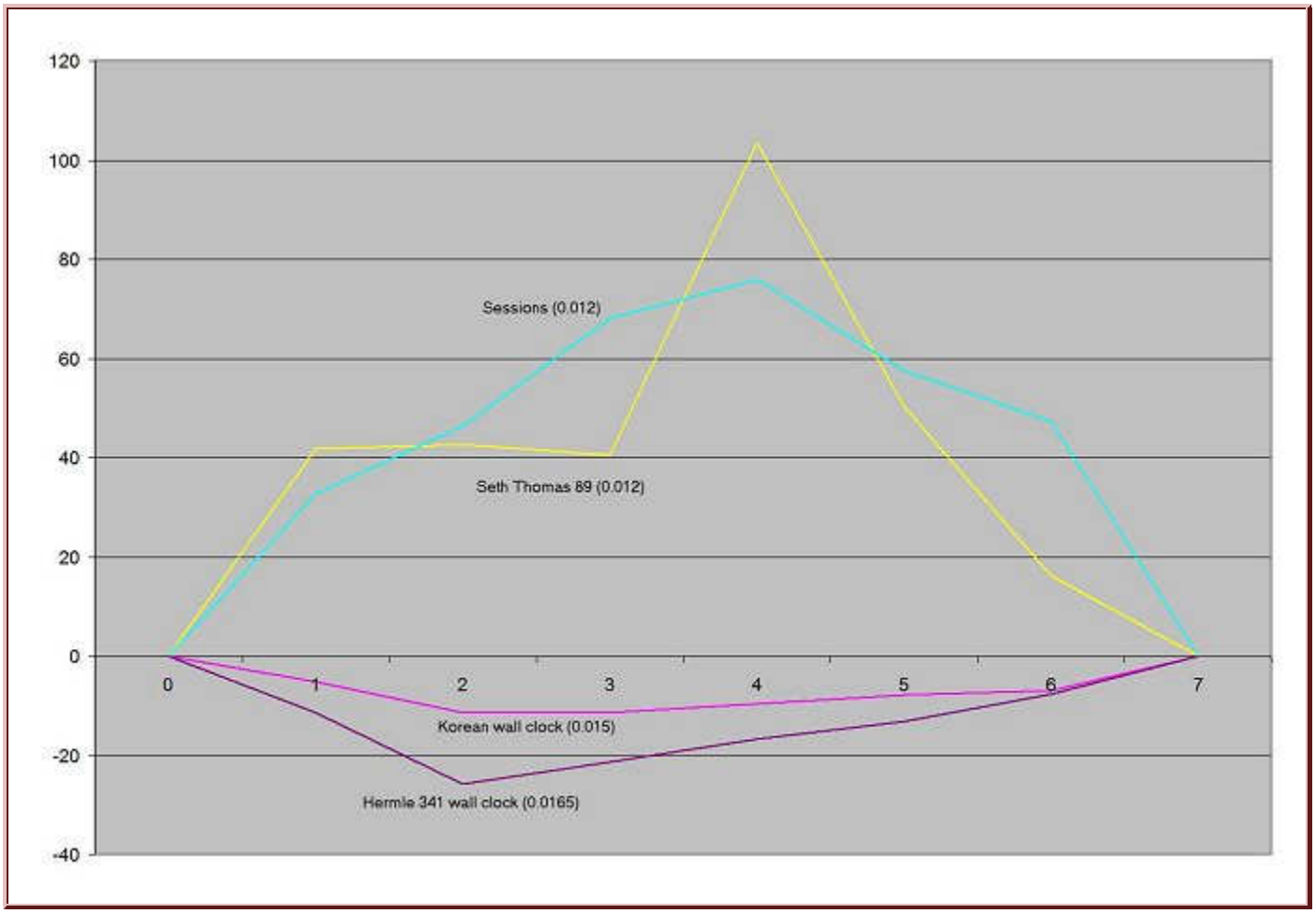
In the 1990s, I saw many Korean and Japanese clocks that came in for repair. The appearance and design of the mechanisms were different when compared to European and American clocks, were difficult to repair, had design problems in the strike mechanism and problems with the grease used on the mainsprings, but these clocks from the Orient offered above-average timekeeping. The clock I saw most frequently had the Korean mechanism in the photo below in a school-house style case, sold by Montgomery Ward around 1980. This clock kept very accurate time and I wanted to know why.



This particular clock does not say "Montgomery Ward" on the dial, but it has the same mechanism. It has a semi-deadbeat escapement because the locking faces of the pallets are not curved, so a small amount of recoil does take place. The clock also has mainsprings that are 3/4" wide, similar to American clocks, so I wanted to compare my Korean clock to my Seth Thomas 89, which also has a semi-deadbeat escapement. Let me quote from a previous essay: "It is worth mentioning that the Timesavers catalog has a 3/4 x 0.015 x 170 inch mainspring for Japanese and Korean 31 day clocks from the 1970s and 80s, because some of their mechanisms look like copies of American clocks from the early 1900s. A 0.015" mainspring, when installed in a Seth Thomas 89, should have a calculated length of 169", and it would have 58% of the strength of a 0.018" mainspring. They were obviously onto something there." I believe that clocks from the Orient were different when compared to American and European clocks because the oriental clocks were designed by engineers and not clockmakers.

The data confirmed my belief that the Korean clock would be far more accurate. However, the data for the Seth Thomas 89 was somewhat irregular, revealing that the mainspring was not the best, so I included the

data for two other clocks from my previous essay for comparison.




When comparing this graph to the graphs in the previous essay, I believe the main reason for the accuracy of this Korean clock lies in the superior quality of the mainspring. Another reason, to a lesser extent, is the open barrel. The Hermle 341 would perform better if it had a larger mainspring barrel like the more expensive Hermle 351 or, better still, an open barrel like most American and oriental clocks. Having a longer mainspring does not affect timekeeping accuracy as much as barrel size. Furthermore, the accuracy of the Hermle clock could probably be improved by replacing the mainspring with another German mainspring from a different manufacturer if the Hermle clock was made before the 90s. The 0.0165" mainspring in this experiment was not a Hermle mainspring. I would not recommend such a strong mainspring: you should use 0.015" or less.

The Korean and Japanese mechanical clocks that I repaired in the 90s were considerably more accurate than virtually all the other spring-driven clocks that I repaired at that time, with few exceptions, yet they were by far the cheapest mechanical clocks available in the 1970s and 80s. Many customers

said their Japanese clocks had run for as long as 25 years, whereas the average Hermle needed an overhaul after about 12 years, and many after fewer years. Oh, the irony! The Korean and Japanese mechanical clocks were also better than the Chinese mechanical clocks I have seen that came later.

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