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Kristina M Leifeste* (kleifest@nmsu.edu). *A Preacher, a Rabbi, and Old Measuring Tools: A Look at the Use of the Diagonal Scale and Gunter's Chain in English Geometry Texts from 1746 to 1984.*

The diagonal scale, whose origins are credited to Rabbi Levi Ben Gershon (1288-1344), is a 2-dimensional scale, drawn on a flat surface, used to measure short lengths up to a precision of three figures, much as we use a caliper today. Gunter's Chain, invented by English clergyman Edmund Gunter (1581-1626), was a 22-yard long metal chain used for surveying large areas of land. While the diagonal scale is still seen today in architecture and drafting books, Gunter's Chain is no longer used. However, both tools were presented in early practical geometry texts. This talk will cover the history and descriptions of both tools, their uses, and their prevalence in English and American geometry texts beginning from (at least) 1746 (Stewart) through 1984 (Earle). Using these texts, we are able to chronicle the appearance of these instruments, presented both separately and together, and to show how they were used to solve geometry problems in practical ways. (Received November 29, 2011)