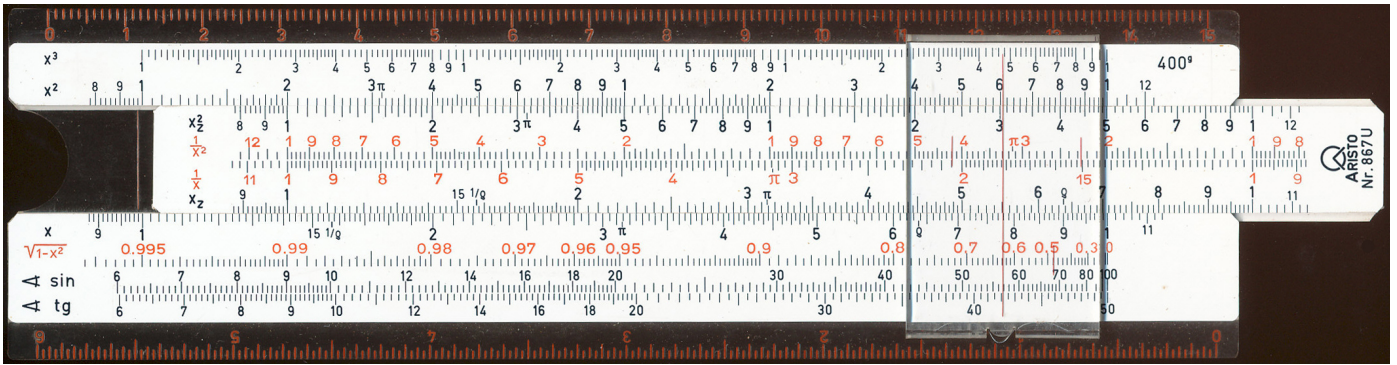


**The Slide Rule—Versatile Analogue Calculator**  
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**Impact** Slide rules have been widely used in many disciplines before the availability of affordable handheld calculators in the mid 1970s. Their accuracy was sufficient to facilitate for example the design of many familiar engineering structures.

**History and principle of operation** The scales are logarithmic rather than the linear scales of a ruler. Logarithms were independently developed by John Napier (right, 2012, Germany, private issue) and Michael Stifel in the early 17<sup>th</sup> century. Practical examples of slide rules were designed shortly after. Presenting the scales on two sliding surfaces allows multiplication, division and many other maths functions to be calculated with ease.



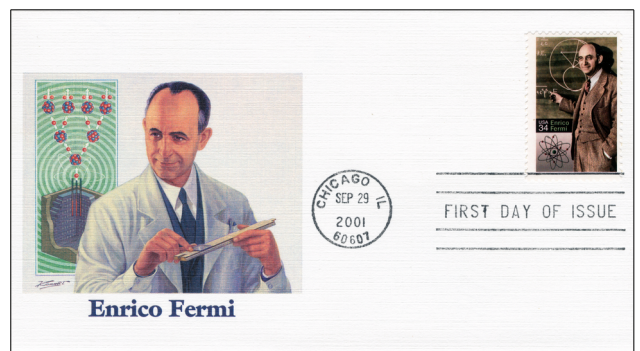
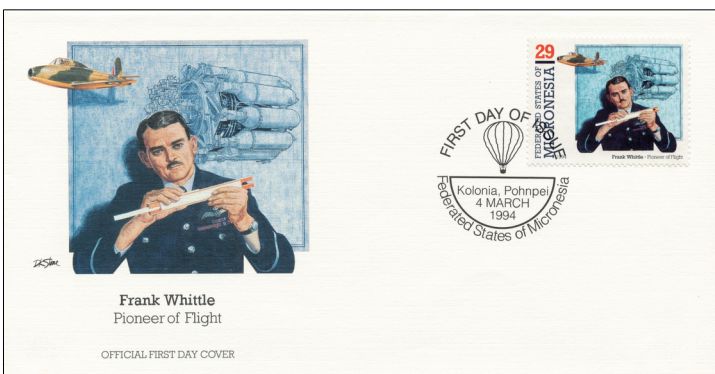
**Form and Function** They have been made of a variety of materials including wood, metal and plastics. The more common forms have linear 5, 10 and 20 inch scales with ten the most typical. A clear sliding cursor is typical. An Aristo 5 inch rule is shown above (natural size, multiplying by 2 shown on upper paired scales). Accuracy increases with scale length and circular rules enable much longer spiral scales to be incorporated while remaining compact.



**In Philately** Stamps depicting a slide rule are rare with barely eleven found to date but their scarcity makes them an appealing topic to track them down.

Romania (right, 1957, one of two) features the rule prominently and issued for the Second International Congress of the Society of Engineers and Technicians.

Others form part of a design to celebrate a person's achievements where they would have used a slide rule. The Russian stamp (left with detail, 2012) was issued on the 100<sup>th</sup> anniversary of the birth of pilot and navigator Marina Raskova. A conventional model is shown but there are specialist rules used in aviation with some still in production.



There are a few first day covers which feature famous scientists and engineers using a rule (two above, 25% natural size). Enrico Fermi was awarded the Nobel Prize for Physics in 1938 for his work on nuclear processes (above right, USA, 2001). The cachet is a painting by Gherman Komlev.

Frank Whittle who invented the turbojet engine is shown on a Micronesian stamp and on the cover (above left, 1994). The attractive design is credited to David K. Stone. Nauru (right, 2008) used the photo on which the Stone painting was based. The slide rule shown has a wooden stock and slider, both with celluloid scales. This was a common design before all plastic models became dominant.

