Tension test, Impact test, Hardness test

Who invented these testing methods?

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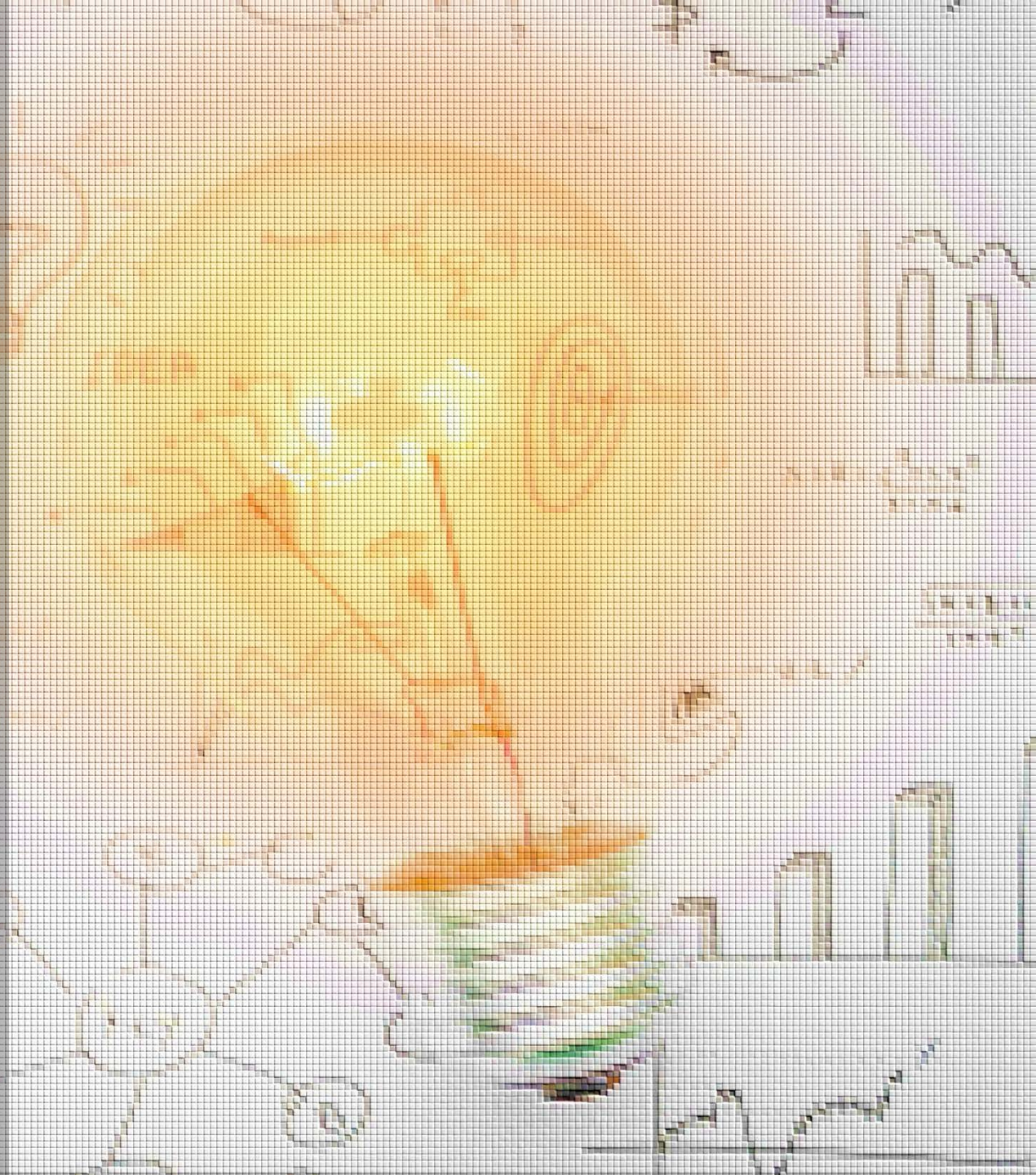
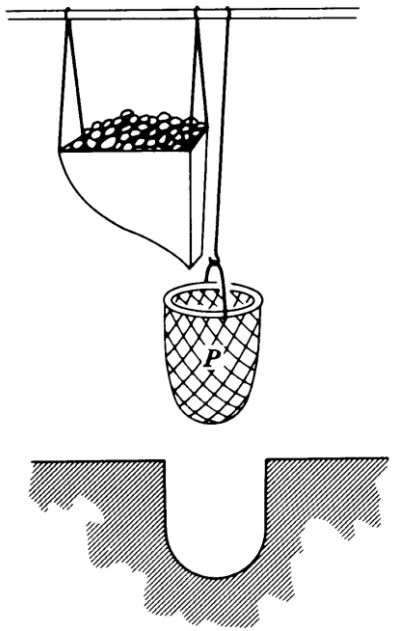
The story of the invention of testing methods is interesting.

In the next slides, we will get to know those who introduced famous tests to the world of engineering for the first time.



Tension test

500 years ago, Leonardo Da Vinci describes an experiment for studying the tensile strength of wire, entitled, ``Testing the strength of iron wires of various lengths''

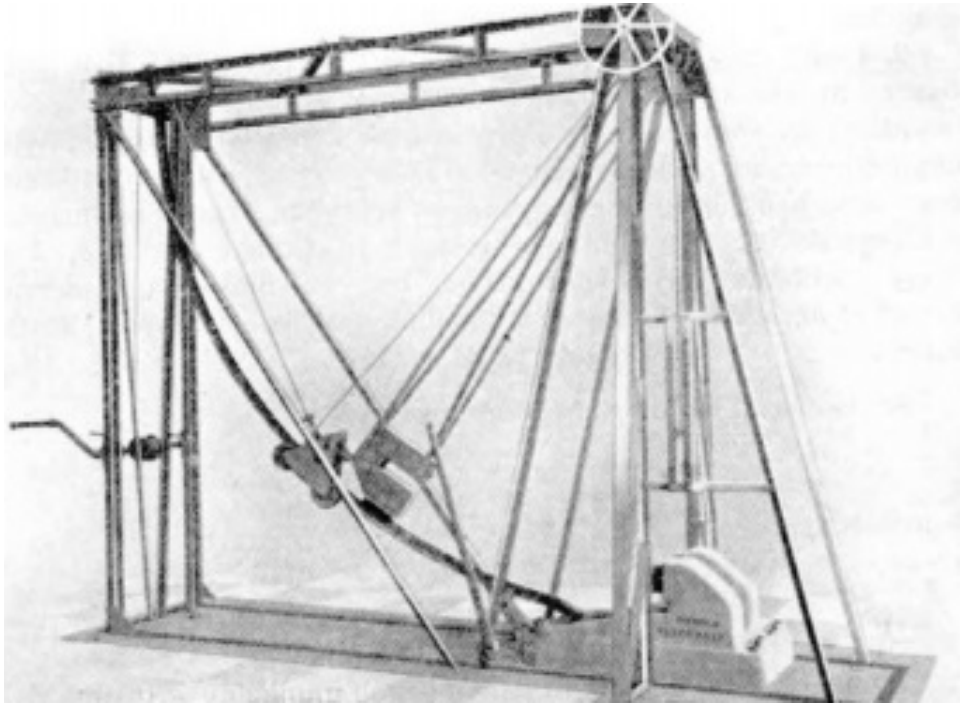


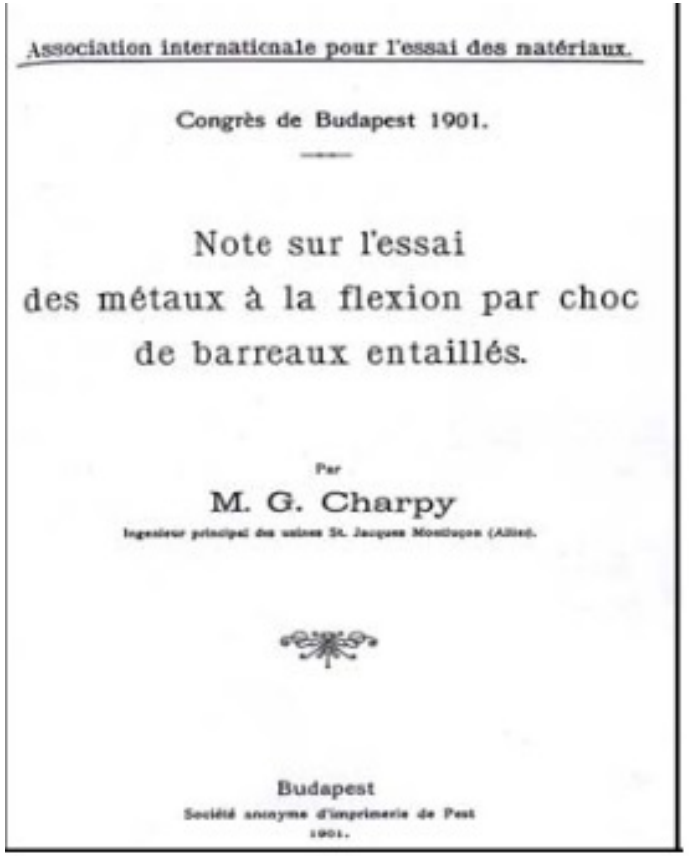
In the experiment, a wire was used to suspend a basket. The basket was filled slowly with sand, fed from an adjacently suspended hopper. When the wire suspending the basket breaks, the sand in the basket was weighed to establish the tensile strength of the wire.

He observed: The longer the wire, the smaller the load for failure.

Charpy Impact test

Augustin Georges Albert Charpy (1865-1945), a French metallurgist, In the article he presented in 1901, explained the device he had built for a new testing method.





Association internationale pour l'essai des matériaux.

Congrès de Budapest 1901.

Note sur l'essai
des métaux à la flexion par choc
de barreaux entaillés.

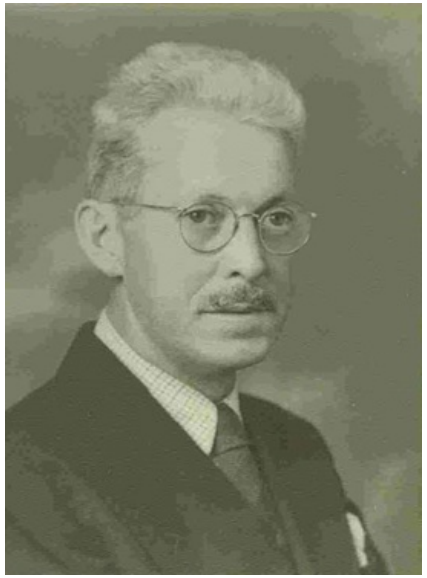
Par
M. G. Charpy
Ingénieur principal des usines St. Jacques Montluçon (Allier).

Budapest
Société anonyme d'imprimerie de Pest
1901.

Hardness test

Johan August Brinell, (1849 –1925), was a Swedish metallurgical engineer that proposed the Brinell hardness method in 1900.

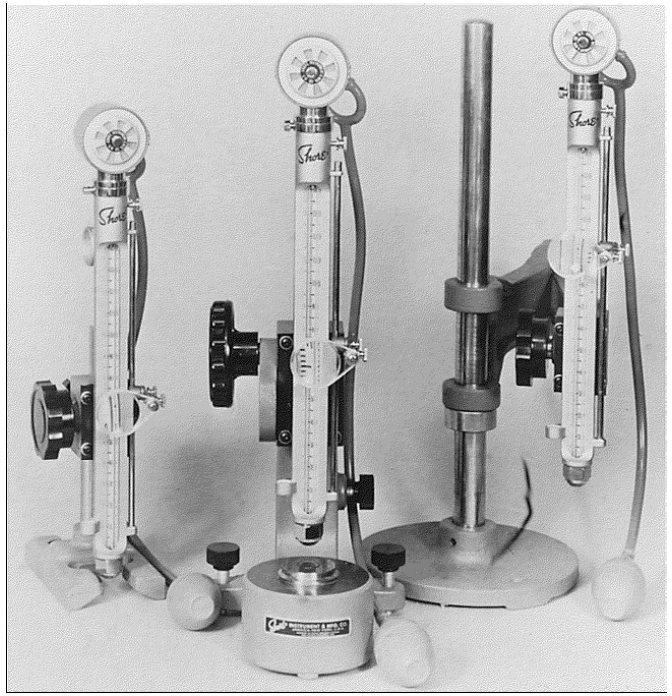
Stanley P. Rockwell (1886–1940) in the United States invented the Rockwell hardness tester at 1919.



The Vickers hardness test was developed in 1925 by Robert L. Smith and George E. Sandland at Vickers Ltd. (England)

Dynamic (Rebound) Test Method

Albert Ferdinand Shore (1876- 1936) was an American metallurgist who invented the Shore durometer (Scleroscope dynamic hardness tester) in 1907.



Leeb rebound hardness test

The Leeb rebound hardness test method (Equotip) was developed in 1975 by Dietmar Leeb at Proceq SA (Swiss) to provide a portable hardness test for metals.

I couldn't find Dietmar Leeb photo

Metallography

Henry Clifton Sorby (1826-1908), an English microscopist and geologist, does early microscope research. His major contribution was the development of microsopical metallography.

This presentation was developed by Kamran Khodaparasti.

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References:

https://en.wikipedia.org
Da Vinci's Tensile Strength Tests, J. R. Lund and J. P. Byrne

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