



Materials

From Pottery to Plastics

First Process for Making Aluminum

In 1885, Charles Martin Hall, a native of Thompson, Ohio, and graduate of Oberlin College, discovered the first practical process for making aluminum from bauxite ore. The process opened the way for widespread use of aluminum in consumer and other products.



The story goes that while attending Oberlin, Hall's professor, Frank Jewett, showed a small piece of aluminum to the students and predicted that anyone who could come up with an economical way to create aluminum would become quite rich. Hall apparently took the idea to heart, built a small lab at his home, and continued experimenting after graduating until he solved the puzzle. He figured out how to make aluminum. In February, 1886, Hall filled a carbon crucible with a cryolite bath containing alumina and passed an electric current through it. The resulting mass contained several pellets of pure aluminum.



The electrolytic method - the Hall-Heroult process – remains the basis of the world's aluminum industry. However, turning the experiment into an industry took a great deal of support and funding.



In 1888, Hall and financier Alfred E. Hunt founded the Pittsburgh Reduction Company, which now is the Aluminum Company of America (ALCOA). Aluminum once cost more per ounce than gold. By 1914, Hall's process reduced its price to 18 cents a pound.

Hall's professor was right. Hall made a fortune on the process. He left much of the proceeds to Oberlin College and other educational institutions. ALCOA has remained the world's leading aluminum company.

Find out more...

- [ALCOA](http://www.alcoa.com) (www.alcoa.com)
- [ALCOA History](http://www.alcoa.com/global/en/about_alcoa/dirt.asp) (www.alcoa.com/global/en/about_alcoa/dirt.asp)
- [Aluminum Production Process Video](http://www.alcoa.com/global/en/about_alcoa/dirt_video.asp) (www.alcoa.com/global/en/about_alcoa/dirt_video.asp)
- [It All Starts With Dirt - The Making of Aluminum at ALCOA \(PDF\)](http://www.alcoa.com/global/en/about_alcoa/dirt/pdf/startswithdirt.pdf) (www.alcoa.com/global/en/about_alcoa/dirt/pdf/startswithdirt.pdf)