

# The Sines of the Fathers

Gear Technology's bimonthly aberration — gear trivia, humor, weirdness and oddments for the edification and amusement of our readers. Contributions are welcome.

**Y**our Addendum team has come across a number of Good Ole Boys in its time; now we bring you something of even more interest—a Good Ole Gear Book. Mr. Robert Price, of Automation • Gears • Machinery, a gear consulting firm in Delanson, NY, shared with us a real find.

A collector of rare books when he's not out solving other people's gear problems, Bob Price showed us his 1806 copy of *A Treatise on the Teeth of Wheels, Pinions, &c.*, by Charles Étienne Louis Camus. The book, in remarkably good condition (we should all look so good at 189), is a translation from the French of Books X and XI of Camus' *Cours de Mathématique*, first published in Paris in 1766. It also includes extracts from another important contemporary book, *Mison's Elements of Science and Art*, Vol. 1.

The significance of the book is seen more clearly in its historical context. By 1806 the industrial revolution was beginning to make itself felt in England. Watt had perfected his steam engine and others were developing variations on the theme with nearly the speed of a software revision. New uses

for gears (and the need to build them more and more accurately) were growing exponentially. Books like the *Treatise* were invaluable for those early engineers riding the first wave of industrial development.

## Boy Genius

Camus was one of the Boy Wonders of the 18th century Enlightenment. Born in France in 1699, he was addressing the French Academy on mathematical subjects by the time he was twelve. More than an intellectual oddity, he also had a sense of adventure. In 1736, he was part of an expedition to Lapland co-led by Anders Celsius (yes, *that* Celsius), to measure accurately a degree of latitude.

Camus became a professor of mathematics and engineering at the University of Paris. He was appointed the Royal Architect in 1739 and a Fellow of the Royal Society in 1764. He died in Paris in 1768, but his research into cogs, cogged wheels and pinions remained important for the engineering pioneers of the early 19th century.

## Pages of History

The book itself is fascinating and has a certain air of mystery. The paper is heavy, with a high rag content, and the

type was hand-set. Bob Price speculates that the book was originally bound in leather, but was rebound, probably sometime in the mid- to late 1800s. The current binding is heavy board covered with marbled paper and trimmed in brown leather with gold lettering on the spine. All the wood-block-print diagrams are bound at the back of the book in an interesting three-part accordion fold with a very wide left margin that allows them to be pulled out and viewed side-by-side with the appropriate text.

One of the book's previous owners has left his personal mark. On the front flyleaf, Alan Simpson of Kirkcudbrightshire, Scotland, has signed the book. Based on the note he made on the title page, we can assume he found something of interest on page 97, which covers “. . . the Number of the Teeth which the Wheels of a Machine ought to have, that two or more of them may perform in the same Time a given Number of Revolutions.”

On the back flyleaf is another intriguing note in the same handwriting: “Presented to Allan Simpson for his kindness to one Janet Sinklar, teacher of Edinburgh.” Who was Janet Sinklar, and what kindness did Simpson perform?

Another mystery is how the book got from Alan Simpson's library in Scotland to a used book dealer in Rhode Island, from whom Bob Price purchased it. Any number of possibilities occur.

The Addendum staff has already turned their imaginations to the development of possible plots for a movie or a glitzy t.v. mini-series (with Mel Gibson as Simpson and Jane Seymour as Janet Sinklar). Contributions to this venture, (creative or financial—especially financial) will be appreciated. We'll thank you in our Oscar acceptance speech. Honest. ⚙

