



THE COVER

Herbert Hoover became a confirmed bibliophile during his student days at Stanford University, 1891–1895. His personal bookplate reflects a lifelong interest in the history of mining which he developed at the same time. An orphan, short of funds, Hoover secured a part-time job working in the office of Professor John Casper Branner, his mentor in the geology department. When Branner joined the faculty in 1892, he brought an entire boxcar of books to the newly opened university. At the time Branner's private library was far richer than the university's holdings in his field. Hoover studied the books in Branner's collection, which probably included information about the landmark treatise *De Re Metallica* written by the German physician Georg Agricola (1494–1555) and published posthumously in 1556 by the illustrious firm of Johannes Froben in Basel. Because of Hoover's intense research on this book, it is often assumed to be the source of his bookplate. The actual image comes

Bookplate courtesy of Hoover Institution Archives.

from an older work that he studied as part of the background research on Agricola.

Hoover's future wife, Lou Henry, was also a geology major at Stanford and took classes from Branner. It is very likely that she was familiar with this Latin text that had a reputation as being untranslatable. Agricola had adapted classical Latin to the requirements of describing sixteenth-century metallurgy. The neologisms which Agricola coined were considered very obscure. Lou Henry was adept at languages and also fascinated by geology, so it is no surprise that a book like *De Re Metallica* would engage her interest.

From the first edition *De Re Metallica* was considered both a luxury item and a major scientific work. The content is remarkable for its scientific accuracy. Agricola largely freed the field of mining from the superstitious assumptions of alchemy. The work influenced the mining industry in Europe for over two hundred years. In order to make the difficult text easier to understand, Agricola commissioned hundreds of woodcuts that depicted then state-of-the-art mining technology. Images of crucibles on page 229 and scales on page 265 are astonishingly similar to the tools still in use by Stanford geologists when Herbert Hoover was a student. Other woodblock prints show methods of constructing mine shafts and smelting ore. Equipment is labeled with letters, then identified in a caption under the illustration. The real triumph of the diagrams is the successful way they indicate with cutaway diagrams what is happening both above and below ground level. Scurrying in and out of the tunnels are armies of busy miners in protective clothing, often pointed caps or wide-brimmed hats. They wield shovels and ladles, and look rather like Snow White's dwarves. Surviving records indicate that the time devoted to creating these carefully made illustrations delayed publication of the book. These woodcuts are much more sophisticated than the even older image in the center of Hoover's bookplate, which was an early attempt at depicting miners working on a cutaway mine shaft.

In his reminiscences Hoover emphasized that as students he and Lou considered such fine books as *De Re Metallica* financially out of their reach. Once he graduated and entered the field of international mining, his fortunes improved dramatically. Hoover had already developed a reputation for identifying potential gold mines in Australia when he returned to California in 1899 to marry Lou Henry. Together they traveled to various mines in China, Burma, and Russia. They established a home base for themselves in London, then the center of the international mining community. Turn-of-the-century travel by steamer and train provided ample opportunity for the Hoovers to indulge in their love of scholarly books. En route they would read up on the countries they visited. They

acquired an excellent library on China and one on Australia; both sets of books eventually came to Stanford's libraries.

In about 1903 while in Italy, they located a copy of *De Re Metallica* for sale. They had reached a time in their lives when they could afford to collect rare books. The challenge of translating the book became a joint hobby of this successful young couple in 1907. Evenings after dinner, they would pore over dictionaries and recruit friends and assistants to help. In reconstructing the old techniques that Agricola described and the woodcuts depicted, Hoover needed to consult other mining books from the era. His fascination with ancient technology resulted in lengthy and erudite footnotes, often colored with a touch of humor. It seems that Mrs. Hoover, as the better Latinist, did most of the translation, while Mr. Hoover wrote the majority of technical footnotes.

They began buying rare historical mining and metallurgy books during the translation work. In 1908 they purchased six books, the following year thirteen, then twenty. By 1911 they were buying over one hundred books annually. What began as a reference library for a translation project changed character, and later the books were purchased for their own sake.

It is only natural that they would want to acquire the very first printed works in the field of mining. These practical pamphlets began to appear anonymously shortly after 1500 as introductory textbooks. *Ein Nützlich Bergbüchlein* (A Practical Little Book on Ores) is considered the very earliest of such texts, and Agricola used it as a reference for his more thorough and polished treatise. Agricola attributes the authorship of the little book to Calbus of Freiberg, probably Ulrich Rühle von Kalbe, who died in Leipzig in 1523.

Herbert Hoover acquired a copy of the *Bergbüchlein* which had been published in Erfurt in 1527 by Iohan Loersfelt. (This volume has been carefully preserved along with the entire *De Re Metallica* Library by the Norman F. Sprague Memorial Library at Harvey Mudd College in Claremont, California.) Although the book was not intended as a luxury edition, it does contain a delightful illustration on the title page. The image shows a cutaway hill that reveals a miner in a tunnel chipping away at ore that is lifted by workers at the surface by means of a bucket on a rope. The image was reproduced in Hoover's historical appendix (see page 610) for *De Re Metallica*, to show the ancestry of the wonderful cutaway diagrams commissioned by Agricola. In fact, Hoover himself wrote a mining text with updated versions of such tunnel illustrations (*Principles of Mining* [New York: Hill, 1909]).

The finished translation, replete with a learned but still charming scholarly apparatus, was printed and published privately by the Hoovers

in 1912 while they were still living at the Red House in London. Great care was taken to use appropriate paper and type to give the feeling of the original *De Re Metallica*, and the woodblock prints were reproduced with precision. The Hoovers' close friend Edgar Rickard was entrusted with the task of supervising the publication because of his background in technical publishing. The printer and binder was Albert Frost, who selected a fine vellum for the binding. Three thousand copies were printed. Some were sold, but the majority were sent as gifts to the Hoovers' friends and associates.

It was Edgar Rickard who commissioned the bookplate as a Christmas present for the Hoovers at about this time.* The artist Henry B. Quinan made the original drawing for Mr. Hoover's bookplate and incorporated into the design the wonderful title page image from *Ein Nützlich Bergbüchlein*. Quinan retained the antiquarian feel of the early-sixteenth-century mining scene by adding architectural elements in the frame with gnome-like miners at work. Hoover's initials can be seen in the monogram HCH at the bottom of the design.

Less than two years after the publication of the translation, war broke out. Hoover's attention was diverted from historical scholarship to the human catastrophe of the Great War, and the rest of his life was spent in public service. After 1914 he no longer added to his remarkable collection on the history of mining. He did manage to combine his concern over modern warfare with his book-collecting interests and founded the Hoover War Library in 1919, a library that has continued to grow over the years and now contains more than a million books on serious economic and political problems. But it is the mining and metallurgy library that shows the sheer joy that Hoover felt in the pursuit of rare books.

Elena S. Danielson

Note

*I am grateful to Dwight Miller of the Herbert Hoover Library in West Branch, Iowa, for solving the mystery of who commissioned the bookplate. I would also like to thank James Otto of the Norman F. Sprague Library for his helpfulness in locating Hoover's own copy of *Ein Nützlich Bergbüchlein*.

Select Bibliography

Agricola, Georgius. *De Re Metallica*, translated from the first Latin edition of 1556 by Herbert Clark Hoover and Lou Henry Hoover. London: *The Mining Magazine*, Salisbury House, 1912. In 1950 Dover Publications of New York issued an inexpensive facsimile of the Hoovers' translation that is periodically reissued.

Honnold Library for the Associated Colleges, Claremont, California. *The Herbert Clark Hoover Collection of Mining and Metallurgy*, annotated by David Kuhner, catalogued by Tania Rizzo, introduction by Cyril Stanley Smith. Claremont: Libraries of the Claremont Colleges, 1980.

Hoover, Herbert. "Translating De Re Metallica." *Bohemian Club Library Notes*, May 1958.