

The Family Heritage Series

A weekly discussion of Americanist truths and traditions for those "heirs of all the ages" who will have to preserve that most important inheritance of all — freedom. Produced by the Movement To Restore Decency.



Volume II

Lesson Eighty

Ottmar Mergenthaler

LESSON IDEA

To discuss the importance of inventors to our country, using as an example Ottmar Mergenthaler, the originator of the linotype machine.

PREPARATION:

Read a brief history of printing in an encyclopedia. Pay particular attention to Johann Gutenberg's invention of movable type to aid in understanding Mergenthaler's contribution to the printing industry.

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AS WE GO about our everyday affairs we seldom think about our surroundings. We take for granted that the school bus is going to get us safely to school and home again. In the evening, when we wish to relax, we take it for granted that our television is going to come on when we flick the switch.

Seldom, if ever, do we take time to ponder this important fact: Almost everything around us — whether a TV set, or a lamp, or a bowling ball — was once an idea in an inventor's head. Nothing in our homes "evolved" by itself. Every object had a creator — a man who once sat at his desk and used his own creative imagination to visualize what he wished to produce. He sketched a design on a scratch pad, studied what other men had done in the same field in the past, and finally constructed a working model of his invention — hoping to sell it to the public.

It is important to realize that throughout history, countless men and women have used their imagina-

tions to create new and useful products for us. And each year, new inventors improve what someone in the past originally designed. This entire process — the transforming of ideas into products and the continuous improvement of those products — is what progress is all about.

WHAT SORT OF person is an inventor — the man who uses his creative imagination to devise worthwhile products for his fellow man? If asked to characterize the typical inventor, we would say that, first of all, he is a man who believes totally in what he is doing; and secondly, he is so resolute that nothing will stop him from completing his invention once he has set his mind to it. [Ask family members if they think such determination is a beneficial character trait. Is it always good to be positive about your beliefs?]

Let's consider how determination and self-confidence worked in the life of Ottmar Mergenthaler, the inventor of the world's first automatic type-setting machine.

Ottmar's career was decided by his parents when he was still in his cradle; they *knew* he would become a teacher. After all, his father was a teacher in their tiny village of Bietigheim, Germany. And his mother also came from a family of teachers. So, of course, it was settled. This new member of the family, born on May 10, 1854, would be a teacher when he grew to manhood.

But Ottmar, even as a young boy, showed more

interest in working with his hands than with books. He was excited by the idea that with his mind and a good set of tools, he could create something useful. His whole life seemed to revolve around his love for manual labor. He would volunteer to chop firewood, till the garden, and feed the pigs – anything which allowed him to work with his hands. It was obvious he had no intention of following in his father's footsteps. At first his parents were insulted that he did not want to enter the field of education; later they realized that the choice of his lifework would have to be Ottmar's decision, not theirs.

When he finally chose, at the age of fourteen, to become a watchmaker, he was apprenticed to his Uncle Hahl for four years with his parents' blessing. Uncle Hahl, a kind old man who ran a small watch-repair shop, was so pleased with his young nephew's skills that after three years he paid Ottmar a weekly wage in addition to the room and board he was entitled to as an apprentice.

IN 1872 YOUNG Mergenthaler's apprenticeship came to an end, and he began looking for a job. But German industry had little to offer an eighteen-year-old – especially when hundreds of older men returning from service in the Franco-Prussian War were seeking employment. So Ottmar did what so many Europeans had already been doing for decades: He decided to seek a fresh career and new opportunities in America. He planned to work for August Hahl, his uncle's son, who had a thriving business in Washington, D.C., making electrical instruments and gauges for the government, as well as constructing models of inventions for inventors anxious to receive patents from the government.

The financial panic of 1873 forced Hahl to move his shop to Baltimore; and although business wasn't exactly "booming," he did manage to earn an adequate living. During this period Ottmar was content. At night he attended school to better himself; in his leisure hours he became a skilled mechanical draftsman.

Then, in 1876, something happened to Mergenthaler that was ultimately destined to affect almost every person on earth. It was a sweltering August afternoon in Baltimore – the kind of day that makes tempers short and conversations terse – when two men walked into the shop. One carried a

queer-looking device. They introduced themselves as James O. Clephane, the official stenographer at the Supreme Court in Columbia, West Virginia, and Charles T. Moore, an inventor, also from West Virginia.

Moore had invented a typesetting machine, and Clephane had agreed to provide financial backing. The problem, as Moore told Mergenthaler and Hahl, was that the machine had certain defects and his backers had threatened to withdraw their funds unless he could remedy them.

Hahl looked over the device casually and shook his head. He doubted he could do anything with it; he was an electrician, not a mechanic. Mergenthaler, on the other hand, examined it carefully. After a few minutes, he looked up at Moore and said: "There is a mistake here, but it can be put right – I think."

Moore and Clephane, encouraged by Mergenthaler's interest, left the defective machine with the young watchmaker, whose mind was already busily analyzing the mechanical problems. But after spending a year of effort on it, Ottmar had to give up. His trial-and-error tinkering had not been wasted, however; he had learned the concepts involved in developing a typesetting machine. With this new knowledge he soon formulated his own design and presented it to Clephane. Clephane liked the plan and gave Mergenthaler permission to construct a working model.

The typesetting machine he built worked this

FOR THE SERIOUS STUDENT

Why do you think the United States is the most prosperous nation in the world? Is it because we have the best farmland or an abundance of mineral deposits? Is it because we have used economic imperialism to seize the wealth of other nations at their expense? Or could it be that our nation's free enterprise system gives men the freedom to invent and create without fear and to be able to profit from their creations? Three excellent books which explain the dynamics of free enterprise are: *The Mainspring Of Human Progress* by Henry Grady Weaver, paperbound, \$.95; *Dividing The Wealth* by Howard Kershner, paperbound, \$2.25; and *Understanding The Dollar Crisis* by Percy Greaves, hardbound, \$7.00. All are available from most American Opinion Bookstores or directly from American Opinion, Belmont, Massachusetts 02178 or San Marino, California 91108.

