GUTENBERG'S INVENTION? NOT THE PRINTING PRESS!

Except for gun powder, no invention has shaped our world more than printing from moveable type.. Every aspect of our lives in some way depends upon it.

Historians tell us that it all began in the early 1400s in the German city of Mainz when Johannes Gutenberg, "a stone-polisher and manufacturer of spectacles" began experimenting with ink, type, and paper. And so we like to say that Gutenberg invented the printing press. But that's not quite true: he didn't invent the printing press. He didn't even invent printing.

A version of his press had been used for a couple hundred years by the Dutch and the Italians to print religious pictures and playing cards.

It was a modified version of a rather common piece of equipment used for pressing everything from grapes to linen.

As for printing itself, at least five hundred years earlier the Chinese had discovered that by spreading ink on a cut stone or a piece of wood, an impression could be transferred to cloth or paper.

Paper? Yes, by the year 100 A. D. the Chinese had already discovered how to make paper from the bark of the mulberry tree. And by the 1400s the Europeans had learned how to make plenty of it from linen rags.

So Gutenberg's invention was not the press, nor the paper, nor even the process. Rather, he figured out how to make metal type easily and efficiently so that the letters could be used again and again, and when broken or worn, melted down and recast.

To cast the type he needed a metal that would melt at a sufficiently low temperature, that when cooled, would be hard enough to withstand the wear that comes with continuous reimpressions. He experimented with a number of mixtures before he hit upon the right combination of lead, tin, and antimony.

There remained however the problem of casting the various letter shapes. He needed a form that could be varied to accommodate the different sizes. For example, the letter- "m" is three times as wide as the letter "i."

He resolved that problem by making a small hand-held form that could be varied in width to accommodate the different letter sizes when he poured in the melted lead.

Simply that—and not the press—changed the entire process. Multiples of the same letter could be made quickly, and the same form could be used for letters as different as the wide "m" and the long "j."

Gutenberg's invention was a distinctly mechanical achievement: he made a form for casting the various letter shapes. His invention was not the printing press. His invention was the form itself.

By means of the form, he gave us movable type—the first example of completely standardized and interchangeable parts. And with the movable type, he gave us the printed sheet—the first completely standardized product, manufactured in series. And that made it truly a revolutionary invention in every way, for Gutenberg created the model for all future instruments of reproduction.