# Homage to Gutenberg

HISTORIANS GENERALLY concur that Johannes Gutenberg was born in 1397, making this year the 600th anniversary of the birth of a man whose invention would change the world. A German printer from Mainz, Gutenberg worked in Strasburg before returning to his birthplace. It was there that in 1436 or 1437, he invented movable type made from cast pieces. With this innovation, the printed word became available beyond the wealthy and merchant class, and for a while Mainz was the printing capital of the world.

Just as coinage developed independently in the East and the West, movable type has a similar history. It was known around 1045 in China, where Pi Sheng made handcarved,

NOTES ON PAPER

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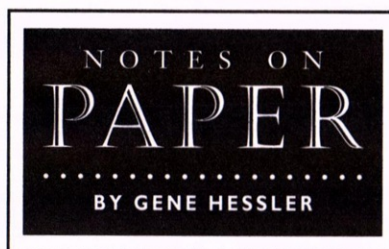
movable type from hardened clay. In the late 13th century, Wang Chen carved movable characters in wood. By 1403 movable, metal type was produced in a type foundry in Korea; examples reside in the National Museum in Seoul. Gutenberg was, nevertheless, the first *European* to formulate and introduce movable type from individually cast letters and numerals.

The earliest examples of intaglio printing from an engraved plate, date from about the same time, the 1430s. Engraved in copper, these figures and motifs later were found in a variety of manuscripts and codices. They are credited to the anonymous "Master of the Playing Cards," who also worked in the town of Mainz. It would not be out of the question to assume not only that these two innovators knew one
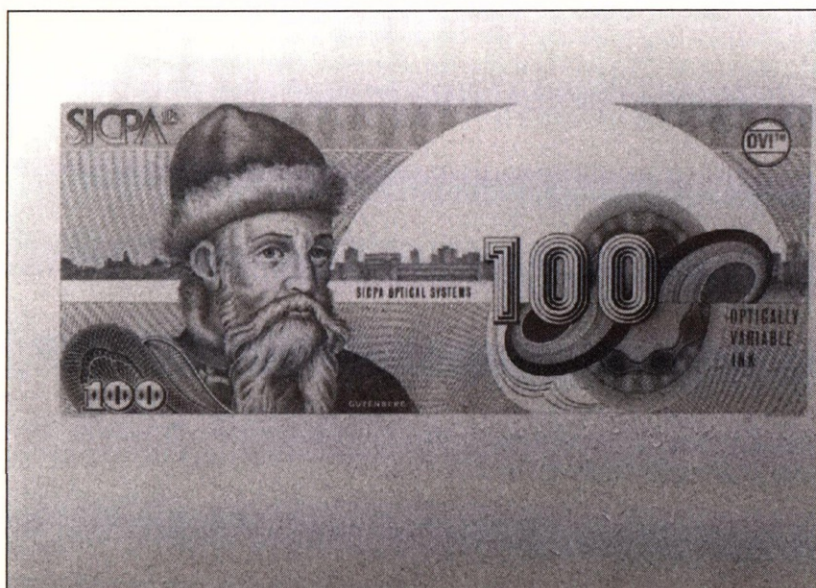
Johannes Gutenberg, inventor of movable type from cast pieces, may be best known for printing the Giant Bible of Mainz, which now is housed in the Library of Congress. The inventor is pictured here on an advertising piece produced by the firm of De La Rue Giori, manufacturers of security printing presses, to demonstrate the optically variable ink of SICPA Optical Systems.

other, but also that they worked together on experiments and were involved in the introduction of the type of engraving we rely on today for the printing of paper money and other securities.

The concept of intaglio engraving, wherein the subject is created on a metal plate, in reverse, seems to have been discovered by accident. A process called "niello" had been used to accentuate the patterns on metal plates and armor by filling in the incised, decorative lines with black enamel. In an effort to protect the surface of a plate on which the enamel was not completely dry, someone probably covered it with a soft, white cloth. The incised image, or part of it, was, thereby, transferred to the cloth.

A mental candle was lit (the light bulb was yet to be invented), and a new art form was born. Centuries later, engravers cut reversed lines and images into steel plates, which were reproduced mechanically. The plates were inked, the excess surface ink was wiped away, and the ink in the incised lines was transferred to paper using tons of pressure.

Gutenberg was trained as a goldsmith, and engaged in typographic experiments as early as 1436. Unfortunately, he did not profit from his inventions. Sometime between 1450 and 1452, he borrowed 1,600 guldens from Johann Fust. When Gutenberg could not repay the loan in 1455, Fust and his son-in-law Peter Schoeffer, who was employed by Gutenberg, took over the entire printing operation. The inventor lost everything.

Considering his possible association with the Master of the Playing Cards, perhaps we owe more to Gutenberg than just his introduction of movable type. For more on this subject, see "The Printer's Devil Bank Note" by F.W. Daniel in the issue of *Paper Money*, award-winning journal of the Society of Paper Money Collectors. More information about the history of printing can be found in *Cathedral, Forge, and Waterwheel: Technology and Invention in the Middle Ages* by F. & J. Gies.

Images of Fust, Gutenberg and Schoeffer are featured on six notes issued by 19th-century American banking institutions: The East River Bank and The Nassau Bank, both in New York City; The Safety Fund Bank in Boston; The Commercial Bank of Troy, New York; The Pittsfield Bank in Massachusetts; and The Yanceyville Bank in North Carolina. However, the title of the engraving as it appears on the notes incorrectly spells "Fust" as "Faust." The fictional Faust, as you know, sold his soul to the devil for youth, knowledge and power.

Speaking of the devil, depicted in the background of the engraving is a "printer's devil," an errand boy or apprentice in a print shop. (The term originated with Aldus Manutius, a Venetian printer who took in an abandoned African boy as a helper in the late 15th century.)

Another portrait of Gutenberg appears on an advertising piece of the type used by security companies, and manufacturers of ink and printing presses to display their capabilities to potential clients. The Gutenberg piece pictured above was made by De La Rue Giori, manufacturers of security printing presses, to demonstrate the optically variable ink of SICPA Optical Systems. Advertising pieces of this nature sometimes are offered by paper-money dealers.　•