

The History of Printing

The first "printer" was the Cave Man.

He stepped from a stream onto a smooth rock and left the wet footmark impression on the rock surface.

About 7,000 years ago Egyptians had developed their communicative skills to the point where scholars were painting hieroglyphics on rolls of papyrus made from dried reeds.

Five thousand years ago men were writing on specially prepared surfaces of skins of animals, on parchment made from sheepskin and vellum made from calfskin.

The Chinese invented paper in 105 AD and by this time inks had been made waterproof.

The Romans made the first mass produced manuscripts - the leading scribe would read aloud a manuscript and an audience of up to 100 trained slaves made copies simultaneously. Scribes in religious orders dedicated their lives to producing scrolls and manuscript books.

In the fourth century AD Roman jurists in recording their laws found vellum too hard to join and roll and began using folded sheets stitched along the fold.

These were man's first books and marked the beginning of the bookbinding trade.

The Chinese in 593 and the Japanese in 770 began using carved wooden blocks for printing and book bindings in those times were made of stamped leather. In 868 the Chinese printed a book using clay type.

Meanwhile paper was finding its way into Europe - the Moors brought it to Spain in about 1150 and the first paper was made in England in 1309.

The paper making technology had taken 1300 years to migrate to England from China.

Coloured inks were coming into vogue and the first trade guilds were founded - the Stationers Company being formed in England in 1403.

Printing took a great stride forward in 1455 when Gutenberg used movable type to print the Bible in black "Gothic" type.

In Europe in 1420 single page block prints were first produced. Johannes Gutenberg invented movable type at Mainz, Germany between 1435 and 1455. Gutenberg had done some printing from wooden blocks. Probably his experience with this method of printing caused him to look for the reusable type alternative.

Although Gutenberg perfected the system, Pi-Chenge in China between 1041 and 1049 had used separate characters in printing. Pi-Cheng's type was cast in porcelain. Type cast from metal in Korea was widely used in China and Japan and the King of Korea established a foundry for casting type in bronze in 1403.

When Gutenberg made his appearance, paper mills existed in Spain, France, Italy and Germany.

The Chinese led the world in making ink for printing. Wei Tang perfected an ink for block printing using lampblack in 400 AD.

Our common type faces are either imitations of early handwritten letters or represent a modification of early type faces which, in turn were modelled after manuscript lettering. The standard Roman lower case letters and capitals assumed their present form about 1470 in a face cut by Nicholas Jensen. Jensen, a Frenchman, learned printing in Germany and did his first printing in Venice, Italy. Letters inscribed by Venetian monks in manuscript books became his models. Although not the first to use Roman letters, he was the first to develop a serviceable and beautiful face which has not been improved significantly in 500 years. The first books in Europe were printed in black-letter of Gothic type - a design imitating that of religious scribes living in the vicinity of Mainz, Germany where Gutenberg began his printing activities.

With Caxton beginning his printing in England exactly five centuries ago, he encountered problems with the law of the land. He inserted various parts of the Bible into other books he printed.- because English translations of the Bible were prohibited by the Church and State. The New Testament (Tyndale's) wasn't printed in England until 1525 and it was 1535 before a complete Bible was printed in England by Coverdale.

Compare the laborious methods of five centuries ago with today - there are machines in existence at present which will reproduce the full text of the Bible in one day. Early crude wooden hand operated printing presses were able to turn out 300 to 500 sheet in a working day - and that working day would have been at least 12 hours. The press which today prints the Forbes Advocate can produce 20,000 copies of a 32 page paper (equal to 640,000 single page impressions) in an hour.

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Exactly five centuries ago this year pioneer printer William Caxton set up the first printing press in Britain. He was the founder of the British printing industry and his successor - Wynkyn de Worde - brought by Caxton from the Continent to Britain - was the father of the British newspaper industry. It was on the British printing and newspaper industry's methods that the Australian industry was based.

Caxton was the first indigenous printer in any country outside Germany, where printing from movable type had been invented and he was also the first really successful businessman in printing in Britain. Caxton opened his business at Westminster in London and in his career printed more than 100 works, this contributing to the foundation of the modern English language.

Caxton's first press was wound by hand in a day when he was able to express free thought and enjoy the benefits of free trade. However, the religious, political and social dissensions of the next two centuries hindered printing, which came to be seen as the machinery for disseminating seditious and heretical material.

It was not until toleration of free expression and trade practices prevailed that the British printing industry really began to make its mark.

The typographical development began with typefounder William Caslon introducing his first types in 1725, breaking the Dutch hold on supplies of type to printers.

Originally printing presses were wooden affairs. The Third Earl Stanhope, in 1800, invented the first metal press, its massive frame having greater strength and stability and incorporated in a new combination of lever and screw mechanism to impart greater pressure over a whole sheet of paper.

These were all "flat bed" presses. It was on November 29, 1814, that the London Times announced the first printing of a newspaper by a steam driven twin cylinder machine. The Walter rotary press began printing from a continuous reel of paper in 1866 and to this machine in 1870 was added an automatic folder, overcoming the need to fold all papers by hand.

The technology of printing being preserved at the Lachlan Vintage Village relates to flat bed machinery and the hand set, movable type as well as the machine set lines of type.

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Handset type is kept in cases. Usually one face or style of type is provided in various sizes, ranging from six point to 72 point. The 72 point is the equivalent to one inch. These letters are assembled in a "setting stick" - wooden or metal with one fixed end and side to hold the separate letters in position. A movable end enables the required width of type to be set. Lines are justified by addition of spacing in various point sizes, the point being a unit of printers' measure. Another unit of measure - length - is the em. Type is assembled in a galley.

Once material has been assembled in the galley, it can then be proofed, usually on a hand operated proofing press. Ink is applied to the type surface by roller, paper is laid on the type and then a heavy hand roller is applied, forcing the paper on to the inked face of the type, leaving the ink impression on the paper.

Proofs are then corrected, errors in type rectified and the material is ready to be placed in the "chase" or metal frame which is fitted to the bed of the printing machine.