

THE BIRTH OF PRINTING.

Of all inventions, probably none has exercised a greater influence upon modern civilization than that of printing. While it has been the mother and preserver of many other inventions which have changed the face of society, it has also afforded facilities for the intercourse of mind with mind—of living men with each other as well as with the thinkers of past generations—which have evoked an extraordinary degree of mental activity, and exercised a powerful influence on the development of modern history.

Although letters were diligently cultivated long before the invention of printing, and many valuable books existed in manuscript, and seminaries of learning flourished in all civilized countries, knowledge was for the most part confined to a comparatively small number of persons. The manuscripts, which contained the treasured thoughts of the ancient poets, scholars and men of science, were so scarce and dear that they were frequently sold for double or treble their weight in gold. In some cases they were considered so precious that they were conveyed by deed, like landed estate. In the thirteenth century, a manuscript copy of the "Romance of the Rose" was sold at Paris for over £33 sterling; a copy of the Bible cost from £40 to £60 for the writing only, for it took an expert copyist about ten months' labor to make one. Such being the case, it will be obvious that books were then, for the most part, the luxury of the rich, and comparatively inaccessible to the great body of the people.*

Even the most advanced minds could exercise but little influence on their age. They were able to address themselves to only a very limited number of their fellow-men, and in most cases their influence died with them. The results of study, investigation and experience remaining unrecorded, knowledge was for the most part transmitted orally, and often inaccurately. Thus many arts and inventions discovered by individuals became lost to the race, and a point of social stagnation was arrived at, beyond which further progress seemed improbable.

This state of things was entirely changed by the introduction of printing. It gave a new birth to letters; it enabled books to be perpetually renovated and multiplied at a comparatively moderate cost, and to diffuse the light which they contained over a much larger number of minds. It gave a greatly increased power to the individual and to society, by facilitating the intercourse of educated men of all countries with each other. Active thinkers were no longer restricted by the limits of their town or parish, or even of their nation or epoch; and the knowledge that their printed words would have an effect where their spoken words did not reach, could not fail to stimulate the highest order of minds into action. The permanency of invention and discovery was thus secured; the most advanced point of one generation became the starting point of the next, and the results of the labors of one age were carried forward into all the ages that succeeded.

The invention of printing, like most others, struggled slowly and securely into life. The wooden blocks, or tablets, of Laurence Coster were superseded by separate types of the same material. Gutenberg, of Mentz, next used large types cut in metal, from which the impressions were taken. And finally, Gutenberg's associate, Schœffer, cut the characters in a matrix, after which the types were cast, and thus completed the art as it now remains.

*It must be borne in mind that money in the thirteenth century was worth, by comparison, twelve times what it is now.

It is a remarkable circumstance, that the first book which Gutenberg undertook to print with his cut metal types was a folio edition of the Bible in the Latin vulgate, consisting of 641 leaves. When the immense labor involved in carrying out such a work is considered—the cutting by hand, with imperfect tools, of each separate type required for the setting of a folio page, and the difficulties to be overcome with respect to vellum, paper, ink and press work, one cannot but feel astonished at the boldness of the undertaking; nor can it be a matter of surprise that the execution of the work occupied Gutenberg and his associates a period of from seven to eight years.

We do not, however, suppose that Gutenberg and his associates were induced to execute this first printed Bible through any more lofty motive than that of earning a considerable sum of money by the enterprise. They were, doubtless, tempted by the immense prices for which manuscript copies of the Bible then sold, and they merely sought to produce, by one set of operations, a number of duplicates, in imitation of the written character, which they hoped to be able to sell at the manuscript prices.

But as neither Gutenberg nor Schœffer were rich men, and as the work involved great labor and expense while in progress, they found it necessary to invite some capitalist to join in them, and hence their communication of the secret to John Faust, the wealthy goldsmith of Mentz, who agreed to join them in their venture, and supply them with the necessary means for carrying out the undertaking.

The first edition of the printed Bible having been disposed of without the secret having been revealed, Faust and Schœffer brought out a second edition in 1462, which they again offered for sale at the manuscript prices. Faust carried a number of copies to Paris to dispose of, and sold several of them for 500 to 600 crowns, then price the paid for manuscript. But great was the astonishment of the Parisian copyists when Faust anxious to dispose of the remainder, lowered his price to 60, and then to 30 crowns. The copies sold, having been compared with each other, were found to be exactly uniform. It was immediately inferred that these Bibles must have been produced by magic, as such an extraordinary uniformity was considered entirely beyond the reach of human contrivance. Information was forthwith given to the police against Faust as a magician. His lodgings were searched, when a number of Bibles were found there complete. The red ink with which they were embellished was supposed to be his blood. It was seriously believed that he was in league with the devil; and he was carried off to prison, from which he was only delivered upon making a full revelation of his secret.

Several other books, of less importance, were printed by Gutenberg and Schœffer at Mentz—two editions of the Psalter, a Catholicon, a Codex Psalmodum, and an edition of Cicero's offices; but they were printed in such small numbers, and were sold at such high prices, that, like the manuscripts which they superseded, they were only purchasable by kings, nobles, collegiate bodies, and rich ecclesiastical establishments. It was only after the lapse of many years, when the manufacture of paper had become improved, and Schœffer had invented his method of cutting the characters in a matrix and casting the type in quantity, that books could be printed in such forms as to be accessible to the great body of the people.—*Smiles' "The Huguenots."*

STOVES.—It is now just about 50 years since stoves—cooking and heating—first began to be generally used. That was when Americans began to make stoves for the home market.