HOW WE CAME TO HAVE ARITHMETIC

Doing sums by machinery. Computing scales are found in many stores.

WHEN men first learned to count, arithmetic was invented, for arithmetic is the knowledge of numbers and their use. It enters into our daily lives in telling time, in spending money, and in all forms of measuring. It is used to keep score in games. It is used in cooking, sewing, gardening, and other occupations of the home. It is necessary to the farmer, to the man who works at a trade, to the merchant, and to men and women in the professions.

When men first became farmers and herdsmen, they had to count their flocks, the yield of crops, and the like. Among the methods for doing this, the one most employed was based on the use of the fingers. That is, a man would count up to 10, and then make a mark, or another man would hold up one finger.

Greek and Roman arithmetic could not go beyond the simplest reckoning. The Romans used a very cumbersome system of writing numbers, as in the Roman figure for 18 which is XVIII; the figure for 1933 is MCMXXXIII. The Romans and Greeks did not like to consider "nothing" as a number, so would not use 0.

When the idea of Arabic numbers, such as 1, 3, 9, and the use of 0 to indicate "place value" (as in distinguishing 13 from 1030) came to Europe, the idea was so startling that the very word for 0 acquired a new meaning. The Arabs called it *sifr* meaning "empty." This is called "cipher" in English.

A knowledge of arithmetic of a simple kind goes back thousands of years. It was known among the ancient Chinese, the Babylonians, the Egyptians, and the Greeks long before the Christian era. But arithmetic, as we know it, is only a few hundred years old. The Arabic notation, in its present form, did not come into general use in Europe until the 16th century.

The first book of arithmetic to be printed was written in Latin, and appeared in Italy in 1478, a few years after printing was invented and shortly before Columbus discovered America. Other early arithmetics were published in 1484 and 1496. The early books contained, along with material which has been discarded, most of the modern methods of arithmetic. The modern world owes to their authors a great debt of gratitude.

Arithmetic is so rigid and accurate that we now have machines which can add, subtract, multiply, and divide. These are frequently seen in offices, markets, and grocery stores.