

THE NATIONAL CASH REGISTER COMPANY

- ADDING AND
SUBTRACTING
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- STATEMENT
MACHINES



The caveman used pebbles to count. The Latin word "calculus," meaning pebble, is the root of our word "calculate" used today.

I. True Man emerges from the Stone Age

Recent archeological discoveries uncovered at the Olduvai Gorge location in Tanganyika, Africa in 1955-1960 provide scientific speculations that the oldest type of ape-man inhabited the Earth nearly one million years ago. The important discovery was that this predecessor of human sapiens actually made crude stone tools and weapons and used these tools effectively.

The student of anthropology is quite familiar with the group of prehistoric apemen known as Pithecanthropus Erectus who lived about 1,000,000 B.C. After the Ice Age, when glacier masses receded toward the North Pole, historians recognize the true predecessor of man in the form of the Neanderthal Man and the even more important Cro-Magnon Man. It is believed that Mr. Cro-Magnon migrated from Asia Minor and Upper Africa into Europe about 100,000 B.C., after the ice mass receded from the land mass.

Then did Homo Sapiens emerge from the Stone Age. The biologist classifies him as a human being with the power of thought, reasoning, logic, consciousness, emotion, and the ability to communicate with other human beings. These attributes set him above and apart from all other living creatures on this planet.

The Later Paleolithic Man (12,000 B.C.) was such a person. He had learned the mastery of fire. He was rich, made snares, pitfalls and traps to capture "meat" for his table.

Most historians come right down to "modern times" when tracing man's activities as a community life within a semblance of society. About 7000 B.C., Mr. Neolithic Man is credited with making many important advancements in human progress. This fellow "graduated" from guttural growls to spoken words, and changed another form of communication from use of a crude sign language to some of the first forms of recording.

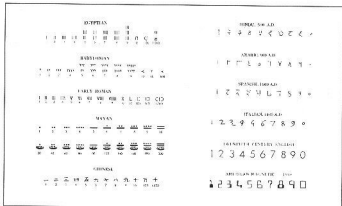
Mr. Neolithic Man was a pretty clever chap. He moved out of his cave to more modern residences constructed at stone slabs with stone roofing. He used well-made pottery and iron for cooking utensils. And he made good use of his discoveries in the mechanical arts—he used the wheel, the lever, the wedge, and took control fire to meet his needs.

Mr. Neolithic even figured out a way to count—one, two, three and "many." He probably used these fingers of one hand in a crude sign language in the beginning. After "3," he just gave up the count with "many" in a clenched fist. However, he wasn't one to be easily stampeded by "many." He overcame the "many" problem with some pebbles, and amazing as it may seem, our word "calculate" was derived from the Latin word "calculus" which means "pebbles."

Mr. Neolithic would take some pebbles from one pile and place them, one by one, in another pile as he counted. This was good except—when he "cleared the marble"—he had no record of the number of pebbles he had counted. Then came his "great discovery."

He noticed that after heavy rains, his footprints were impressed in the wet muddy clay. Why not take some clay, mark some special symbols in the clay while it was wet, then let it harden in the next day's sun? Two pebbles counted, a mark such as "X" impressed in the clay, and presto! a "total" was recorded and preserved as an accounting transaction.

Now, when this clever spear-maker manufactured two top-quality spears for the younger, more agile saber-tooth tiger hunter, he created a "record" of the spear-head made and "sold on credit." The pay-off for these "account receivables?" Perhaps one excellent tiger or giant bear tooth that he could cleverly work into a necklace for his spouse. Or perhaps the deal involved his choice of the best portion of a fine tiger pelt that his mate had "ordered" to be used as a garment. Credit it may have been—he didn't know about money or a medium of exchange. He still bartered in his dealings, but the record of a business transaction had been made, and an accounting procedure had been "seen."



The evolution of numbers and the alphabet provided man with the "tools" to maintain records of all types of business transactions.



The Suan Pan (Abacus), the knotted rope Quipu, and the wooden Tally Stick were three important counting devices used by man.

Man's attempts to perfect counting devices are evidenced by the Chinese Suan Pan, or Abacus, known to have been in use in the 12th Century. The abacus is known as the Schoty in Russia, the Concha in Turkey, the Choush in Armenia, and the Sunban in Japan.

The Peruvian Quipu consisted of a main rope "stem" with minor ropes attached. Various knots in certain locations designated certain values. "Tie-line" versions even featured ropes dyed in different colors.

In England before the days of Elizabeth I, English travelers used a notched "Tally Stick" to record counts. The word "tally" was coined, because the notched stick would be split lengthwise down the center and each party took one half. These parties could "tally" the count later by placing the halves together again for accurate comparison—an "audit" procedure that discouraged cheating, and gave the parties physical evidence of the business transaction agreement.



This antique paper roll cash register was developed in the early 1890's.



Multi-label NCR cash register equipped with optical font for computer input.



Early model Allen-Walker adding machine as acquired by NCR in 1942.



Modern NCR 160 Desk Model Bookkeeping Machine equipped by Punched Tape Recorder.



Early type "Batch" Front Machine—items priced in batches after hand-sort by classification of items.



NCR 450 Profit-Distribution Machine with 40 programmed totals, automatic sort, NCR printing, and analysis.



Four languages serving business and industry around the world — efficiently processed by NCR Units.



The NCR 43 Universal Teller System provides positive control over money and data — permits one-stop banking.



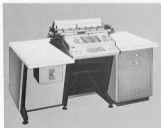
The NCR 735 Magnetic Tape Encoder permits source data to be encoded directly onto magnetic tape — for computer input.



The NCR 420 Optical Reader integrates original entry recordings directly from journal tapes to control EDP processing.



Magnetic Ink Character Recognition (MOCR) imprinting in four fields is provided by the NCR 481 MCR AS-Field Encoder.



The NCR 480 Data Processor features a single tape program control principle and expandable internal memory.