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## **THE RECKONING BOARD AND TALLY STICK\***

Two accounting aids of great importance for society in Sweden and Finland during the 17th, 18th and 19th centuries.

In a complete accounting system a distinction should be made between the following functions: proof, entry, control, systematisation and summary. During the same period of time that the art of writing was developed different technical aids to serve one or more of these accounting functions were invented. The most advanced of such aids is the present-day computer. However, let us turn back the clock for a moment and consider two aids of the simplest kind: the *reckoning board* and the *tally stick*.

### *The reckoning board*

The reckoning board, also called a *memory* or *hole board*, was a board with a number of holes. There were two types of such board. The older type had 100 holes, arranged in 10 rows with 10 holes in each. This type of board was used with one peg which could be inserted into the holes consecutively from top to bottom to count from one to one hundred. The board was used as a memory aid when counting certain units as loads, sacks or barrels. The peg was moved forward one hole for every unit covered. At the end of the day or week it could then be seen how many units had been reckoned. The board was also used to record the number of units completed by workers engaged in piece-work. With the aid of the board a worker could keep a tally of the amount of work done and verify the wages paid to him. The memory board was also used in iron works to keep a record of the number of units received or delivered, for example, of firewood, ore, chalk, coal or pig iron.

A second type of board was more advanced. The holes were arranged in two or three vertical rows, each with ten holes and with a

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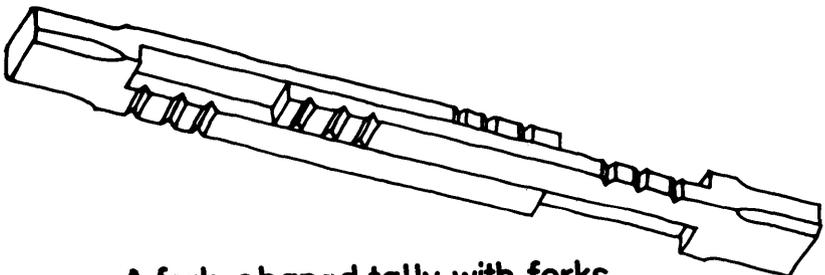
peg for each row. If there were two rows, the units were reckoned in the right row using that particular peg and the tens with the other peg in the second row. On a board with three rows, the row farthest to the left was used for recording the hundreds.

The reckoning board should not be confused with the *abacus*, used by the Romans. This was a reckoning aid, used to facilitate mathematical operations, while the reckoning board was a controlling aid. From this point of view the term memory board is a better name than reckoning board.

The period over which the memory board was used was almost certainly a very long one. Since it could not have required any great inventive mind to think up such an instrument, it is highly probable that its use goes back thousands of years. The strange thing is that it should still be used today. A board with two rows, for example, was in use in a cement factory in Finland as late as the 1930's to keep a record of the number of chalk wagons leaving the quarry. Even today the memory board is still used in workshops and glass factories in Finland.

### *The tally stick*

The tally stick existed in two forms, the simple type and the divided type. Furthermore, there were two types of the latter, the double tally and the fork-shaped tally.



**A fork-shaped tally with forks  
in entering position**

The simple tally had the same function as the memory board: to serve as an aid to the memory when counting or as a verification of work completed. It consisted of a stick in which a notch was cut for every unit counted or piece of work completed. It was also used, however, for verification in bookkeeping. For example, there is a 1662 Swedish decree<sup>1</sup> which says that the book-keepers on the Crown estates should verify the bailiffs' registers with the threshers' tally sticks.

The tally concept was also used on farms to keep a record of hay or other feedstuff taken into the barn in the autumn. For every load of hay brought in, a vertical notch was cut in one of the logs near the doorway. When the hay was taken out in the course of the winter an oblique horizontal notch was cut over each vertical one. It was consequently possible to know at any time how many loads of feedstuff remained in the barn.

This simple and practical method of recording stocks, which was a time-honoured custom, has been maintained in use in Finland up to the present. Such notches can still be seen and studied in old barns, showing how much feedstuff was taken in and out of the barns each year.

The invention of the double tally represented great progress in accounting techniques. The peg that was to be used as a tally after being correctly notched was split into two parts, one for each party to a contract (employer and employee, seller and buyer etc.). For later verification of the transaction the two halves were put together so that the notch cut across the peg was in exactly the same place on each half of the peg. If the tally was made out of a wood with a very clear grain, usually pine, it was furthermore impossible to falsify either half of the tally without detection. The grain in the wood served the same function as the watermark in today's paper money.

By splitting the tally it had become a means of proof. The notches in the tally provided evidence of each piece of work done. The tally's function as verification, even as acknowledgement of debt, can be seen in many documents (court registers and deeds) from the 17th and 18th centuries in Sweden and Finland.

The fork-shaped tally was an improvement on the double tally. It consisted of two forks cut from the same four-sided stick. The forks gripped each other when they were put together so that the two parts could be firmly held together. Because of their construction all four sides of the piece of wood could be notched whereas

only two sides could be used in the case of the double tally. The fork-shaped tally had more uses than the double tally: for example, there were two sides which could be used for noting debits in *daler* and *öre* and two for crediting *daler* and *öre*. Such a tally therefore could have the same function as an account in book-keeping.

It was the high degree of illiteracy that gave rise to the use of the double tally. This is clear from a Swedish decree for smithies dating from the year 1703.<sup>2</sup> It says that those smiths who could not read or write must maintain a tally. Accounts were to be settled twice a year on the basis of the tally and thereafter noted in the factory's book-keeping.

It can be seen from this decree that the tally also served as an initial entry in book-keeping. Instead of noting every separate transaction in the company's books, an account was kept using a tally and the summarized totals entered in the book every six months. Thus the double tally fulfilled three of the functions of a complete accounting system as given at the beginning: it served as a means of proof, as an entry and as a control. The remarkable thing is that the tally served as a means of proof, a function the modern computer cannot perform.

The double tally was not only used in factories but also in commerce and foreign trade. It has been proved that the Hanseatic merchants used tallies. A tally is mentioned in an account-book which belonged to Helmick Ficke from Tallin, who had business contacts with Sweden and Finland in the early 16th century.<sup>3</sup> It was in all probability they who introduced the tally idea to Scandinavia. An indication of this is that the Swedish name for tally, *karvstock*, probably originates from the German *Kerbstock*.

The tally has continued in use in Scandinavia century after century almost up to the present time. And it was certainly no rare tool. This is shown by the fact that it is also mentioned in a metaphorical sense. If it was said that somebody had a full tally, it meant that he had done a lot of work, achieved a lot. And even today in Finland one says "the days work is in the stick", when the work for the day is finished. In some places even an employee's work schedule is called a tally stick.

In German this metaphorical sense of tally stick is still in use, although in a negative sense. For example one can say about a person who has a lot on his conscience: "*Er hat viel auf dem Kerbholz*", "he has much in his tally". In such a case the matter is seen from the debtor's point of view.

In this day and age of the computer we are perhaps tempted to underestimate the importance of the tally in past centuries. But that is a mistake. The tally stick was of tremendous importance and it is well to bear this in mind when computers are in such wide use for accounting purposes. An accounting aid, simple and practical, and in use for many hundreds of years in agriculture, forestry, mining, in smithies and iron works, in shipping, trade and commerce, and for administering justice is well worth serious consideration and our respectful admiration.

## FOOTNOTES

<sup>1</sup>Kammarkollegiets, p. 432.

<sup>2</sup>von-Stiernman, p. 927.

<sup>3</sup>Mickwitz, p. 32.

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