(No Model.)

J. W. ELLIOT.

TALLY MACHINE.

No. 251,850. Patented Jan. 3, 1882.

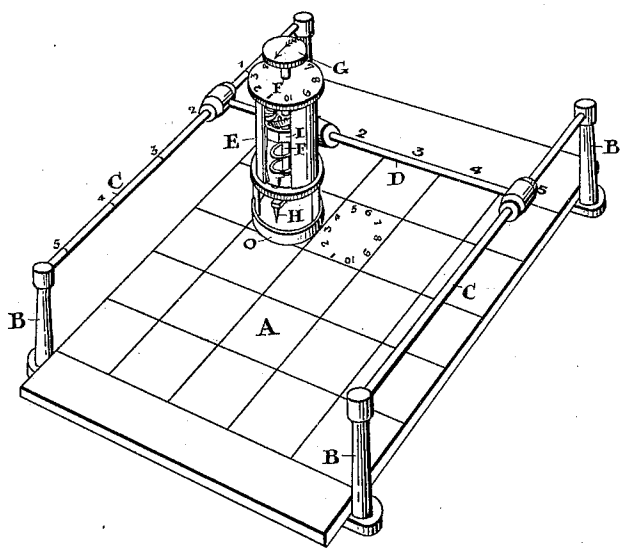


Fig. 1.

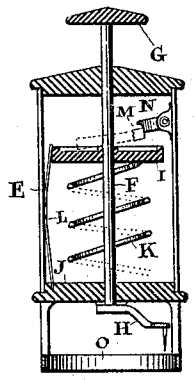


Fig. 2.

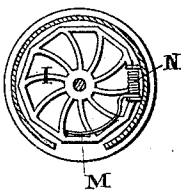


Fig. 3.

Witnesses.

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UNITED STATES PATENT OFFICE.

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TALLY-MACHINE.

SPECIFICATION forming part of Letters Patent No. 251,850, dated January 3, 1882.

Application filed June 21, 1881. (No model.)

To all whom it may concern:

Be it known that I, JOHN WHEELER ELLIOT, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, dentist, have invented a new and useful Tally, of which the following is a specification.

The object of the invention is to produce a tally by which the number of articles may be recorded without the operator being required to examine the tally during the progress of tallying; and it consists of a pointed spindle suspended within a cylindrical casing and provided with attachments by which the vertical movement of the spindle will cause it to revolve a given distance, the said cylindrical casing being carried in an adjustable frame holding on its base a card divided into spaces, each space being numbered, as hereinafter explained, which numbers are cancelled by the pointed spindle, substantially as hereinafter explained.

In the drawings, Figure 1 is a perspective view of my self-registering tally. Fig. 2 is a sectional elevation of the cylindrical case and pointed crank-spindle. Fig. 3 is a sectional plan of this casing.

My improved self-registering tally is designed specially for the use of wharfingers, steamboat-pursers, measurers of lumber, and all whose business it is to keep a record of the number of different classes of merchandise. The duty which my self-registering tally performs is now effected by the clerk making a mark on paper or in a book held in his hand. This necessitates first looking at the article to be numbered and then looking at the space in the book where it is to be marked by the pencil in his other hand, thereby necessitating a removal of his eyes from the articles passing before him, and, as is often the case, while registering one article another passes before him without his noticing it, thereby injuring the accuracy of his tally.

For the purpose of illustrating the operation of my self-registering tally I may say that a wharfinger is receiving a miscellaneous cargo from a steamboat, consisting, say, of nails, hogsheads of sugar, spikes, nuts, and bolts. In removing a cargo of this kind the nails would not all come out together, the sugar next, and spikes next, but they would come out promiscuously, necessitating a constant watching by the tallyman to record what class of goods is at the time passing him besides recording the number of articles received. Before the introduction of my self-registering tally this operation was performed by the tallyman with a pencil marking at certain places in his book, registering, as each keg of nails passes, a mark representing the fact in the space in his book set apart for kegs of nails, and so on for each article, this operation necessitating constant reference to his book, it being impossible to make the recording-mark in the proper place without examining his book at each time he sees the article pass. By the use of my self-registering tally this constant reference to his tally is avoided, the tally being performed by the point at the end of the crank-spindle obliterating a number in one of the spaces representing the article being counted.

Before proceeding to explain the exact operation of my self-registering tally I shall describe briefly its mechanical construction, which, however, might be altered in several ways while accomplishing the object of my invention.

In the drawings, A represents a base-plate so shaped that a card can be readily placed and held upon it. This card is divided into rectangular spaces or spaces of any other suitable shape, each space being marked with a circle of figures, say from one to ten.

B are four posts placed at the corner of the plate A and connected together in pairs by the side rails, C.

D is a cross-head supported by and arranged to slide upon the side rails, C.

E is a cylindrical case supported by and arranged to slide upon the cross-head D, as will be seen on reference to Fig. 1. Passing through the center of this case is a spindle, F, having at its top end a button, G, and at its bottom end a pointed crank, H.

I is a ten-sided block fastened to the spindle F and situated within the cylindrical casing E, as shown.

Between the block I and the bottom J of the case E is inserted a spiral spring, K, which spring holds up the spindle F in the position shown in Fig. 2. A flat vertical spring, L, is

secured to the inside of the cylindrical casing E and presses against one of the flat sides of the block I.

M is a pawl pivoted on the inside of the casing E and provided with a spiral spring, N, set to throw down the point of the pawl.

The top face of the block I has ten notches cut in it coinciding with the ten figures marked in the top of the case E, as shown in Fig. 1. In this figure will also be noticed an arrow marked on the top of the button G, and as the spindle is set in this figure pointing to the figure 1 the length of the spindle F is such that when it is pressed down the pointed crank H extends below the ring O, attached to the base of the cylindrical case, and as this ring O rests on the card held in the base-plate A the pointed crank H will therefore pierce the card so held.

For the purpose of illustrating the operation of my self-registering tally I have marked five rows of rectangular figures on the card held in the base-plate A. We will assume that row No. 1 represents nails, row No. 2 hogsheads of sugar, row No. 3 kegs of spikes, row No. 4 kegs of nuts, and row No. 5 kegs of bolts. As the cargo is commenced to be unloaded we will assume that one-half dozen kegs of nails are being rolled out. The tallyman will set the ring O immediately over one of the spaces in the row of rectangular figures marked 1, and as the first keg passes press down the spindle till the pointed crank H pierces the figure 1 opposite to which it is set. This movement also lowers the block I and allows the spring N to throw downward the pivoted pawl M, so as to engage with a notch in the block I immediately next to the notch in which it rested previous to the downward movement of the spindle. Removing the pressure from the button G the spiral spring K will force up the spindle into its original position; but this movement in raising the pawl M from an inclined to a nearly horizontal position causes the latter to force the spindle to revolve the distance of one notch as the spiral spring K forces it upward. The vertical spring L gives sufficiently to allow of the circular movement, but presses against the block I sufficient to hold it in position during its downward movement. As each keg passes the tallyman has merely to press down the spindle, each upward movement causing the spindle to revolve one figure. As the cylindrical case E can be instantly moved over any of the spaces on the card the tallyman can adjust it almost without looking and continue to record the number of each article being passed without being obliged to look at the tally-paper every time an article is passed by him. He is thereby enabled to keep his eyes constantly upon the articles passing, and his tally can therefore be depended upon to be correct; and, moreover, he is not obliged to use both hands or be compelled to remove his gloves for handling the tally.

When the spindle F is held in the position shown in Fig. 2 it can be turned upon its center in either direction without being interfered with or affected by the pawl M. This enables the tallyman to set his point over any particular figure he may desire to punch. If, for instance, he had tallied six articles of one particular kind and wishes to start upon a new list of articles, he simply turns his spindle so that the arrow upon the button shall point toward the figure 1 on the top of the casing, which corresponds with a similar figure in the spaces on the card, and when he wishes to go back again to the original article he has merely to turn the pointer back to 7, being the next number after 6.

What I claim as my invention is—

1. A spindle, F, suspended within a cylindrical casing, and having at one of its ends a pointed crank, H, in combination with a pivoted spring-pawl, M, acting against the notched block I, so that at each vertical movement of the spindle the pointed crank is caused to move a given distance in a circle, substantially as and for the purpose specified.

2. In a tally consisting of a spindle with a pointed crank so arranged within a casing that at each vertical movement of the spindle the pointed crank is caused to revolve a given distance in a circle, the combination of a vertical spring, L, acting against the flattened edge of the block I, in order to prevent the spindle revolving when it is being forced down, as and for the purpose specified.

3. In a tally consisting of a spindle with a pointed crank so arranged within a casing that at each vertical movement of the spindle the pointed crank is caused to revolve a given distance in a circle, the combination of a card divided into spaces, and held on the base-plate of an adjustable frame arranged to support the casing E, substantially as and for the purpose specified.

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Witnesses:
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