

D. WARREN.
Tallying-Registers.

No. 150,640.

Patented May 5, 1874.

Fig. 1.

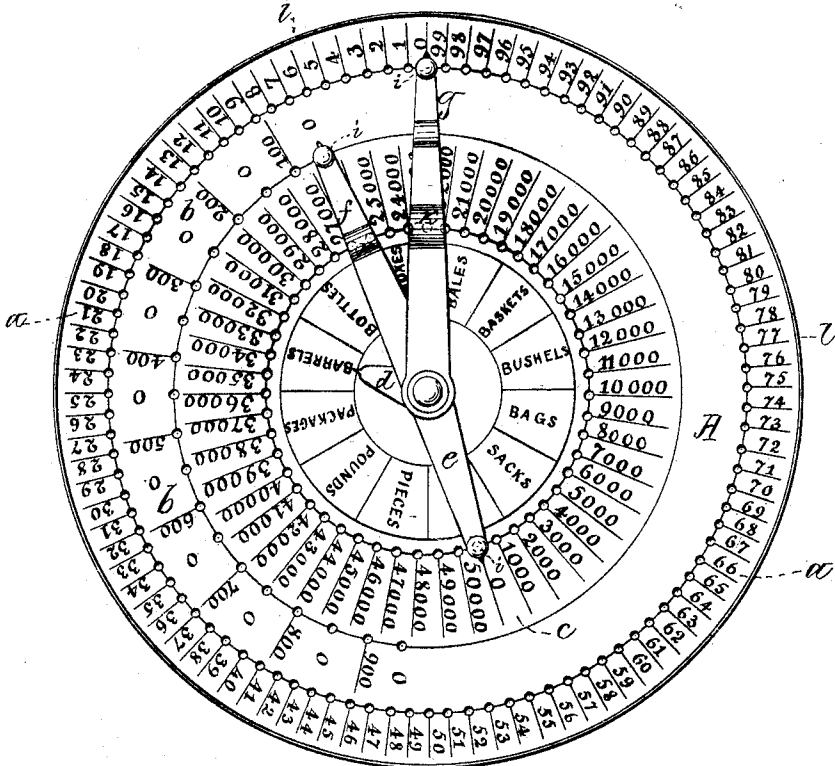


Fig. 2.

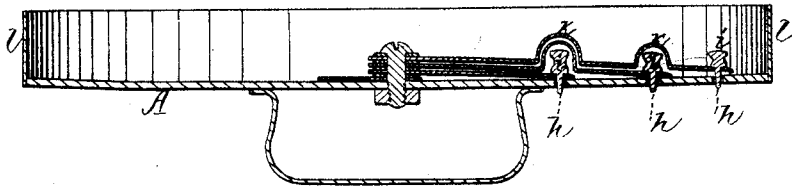


Fig. 3.



Witnesses.
Philip A. Garner
A. B. Caldwell

Inventor.
Daniel Warren
By Wm. C. Wood
Attorney

UNITED STATES PATENT OFFICE.

DANIEL WARREN, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN TALLYING-REGISTERS.

Specification forming part of Letters Patent No. **150,640**, dated May 5, 1874; application filed January 20, 1874.

To all whom it may concern:

Be it known that I, DANIEL WARREN, of the city and county of Washington, in the District of Columbia, have invented certain new and useful Improvements in Tallying-Registers.

My invention consists in the combination, with a dial having on its face several sets of consecutive numbers arranged in concentric lines, of several independent fingers of different lengths mounted on a central axis common to them all, each arranged to sweep over one of said lines of numbers, and mounted on said axis and dial in such a manner that they will not be liable to be moved thereon, except by special manipulation; and also so that the movement of any one finger cannot occasion any movement on the part of either of the others; and I do hereby declare that the following specification, taken in connection with the drawings furnished and forming a part of the same, is a clear and true description of a tallying-register, embodying the several features of my invention.

In the drawings, Figure 1 represents one of my registers in top view. Fig. 2 represents the same in cross vertical section. Fig. 3 represents fingers of a different form, and illustrates a different manner of mounting them on the spindle.

A represents the dial-plate, which may be composed of sheet brass, iron, or other sufficiently durable material. In this instance the dial is shown to be provided with three sets of numbers: the outer circle, marked *a* in this instance, contains numbers from 1 to 100, inclusive; the middle line *b* contains numbers from 100 to 900, inclusive, in hundreds; the inner line *c* contains numbers from 1,000 to 50,000, in thousands. Within the inner circle is a list of such articles as could be conveniently counted by using my tallying-register, and a finger, *d*, is pivoted to the central spindle close to the face of the dial, and arranged to sweep over the list, in order that a tally clerk, after having finished his counting, can, by properly locating the finger *d*, indicate the article to which the register or count relates. The finger *e* extends only to the circle *c*, and is only moved one step at every thousand counts. The middle finger *f* ex-

tends to the middle circle *b*, and is only moved one step after every hundred counts. The upper finger *g* extends to the outer circle *a*, which is moved from figure to figure at every count.

It will be seen that the fingers should be so arranged at the pivot that the movement of any one of them should not occasion any movement whatever of either of the others, and this result, I am aware, can be accomplished in various ways; as, for instance, the spindle may be rigidly mounted in the dial, and provided with a longitudinal groove. The fingers will then be separated by interposed washers, each provided with a projecting fin at the eye, which, by entering the longitudinal groove in the spindle, will prevent said washer from rotating on the spindle, as illustrated in section in Fig. 3, each finger being so curved and sprung that the outer end will press with sufficient frictional contact on the surface of the dial to prevent undue movement thereof. It cannot, of course, be moved by the movement of the next adjacent fingers. I have provided, however, a positive means for preventing undue movement of any of the fingers, by having depressions, recesses, or holes in the dial adjacent to each number, and in fitting to the outer ends of the fingers a pin, *h*, which, by entering one of said recesses in the dial, firmly secures the finger against any undue movement, except by special manipulation. The finger-studs *i* are added for convenience of handling, and in order that these studs may not interfere with the independent movement of the other overlying fingers, the bends or curves therein, as shown at *k*, are provided. The protecting flange *l*, which encircles the dial, affords protection against the undue movement of the fingers when the dial is temporarily laid aside face downward, as a partial preventive against manipulation by meddlers.

The method of using my tallying-register will be readily comprehended. The person taking tally will move the finger *g* from the initial figure point to point, as the count is made, and when one complete revolution is made the finger *f* will be set at its initial number, and when this latter finger has made its complete movement the finger *e* is placed at

the initial number of the circle or line *c*, and so on until the count has been completed, at which time the register will show, in thousands, hundreds, and units, the proper aggregate number.

For use at freight-stations, on wharves, and in manufactories my register will be found of special value, even in the hands of persons whose mathematical capabilities do not extend beyond the power to move the outer finger one step at each count, and the other fingers, respectively, in the manner indicated. The number of sets of numbers may be varied according to special requirements, although three sets, as shown, will be found ample for ordinary uses.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The tallying-register composed of a dial having on its face several sets of consecutive numbers arranged in concentric circles, and several fingers, each of which is independently mounted on a central axis, common to all, and arranged to pass over one of said lines of numbers without communicating movement to either of the other fingers, substantially as described.

DANIEL WARREN.

Witnesses:

W. C. WOOD,

PHILIP F. LARNER.