S. J. TUCKER.

Revenue Register.

No. 202,305. Patented April 9, 1878.

Fig. 1.

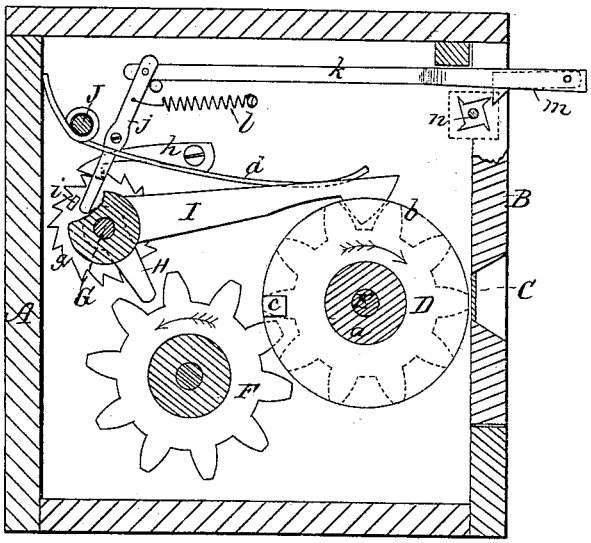
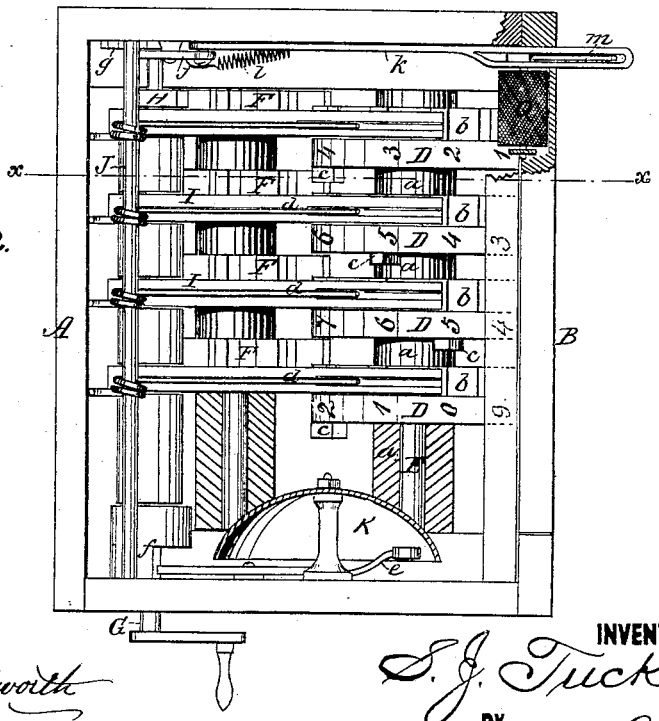


Fig. 2.



WITNESSES:

W. W. Hollingsworth

Edw. W. Byrn

INVENTOR:

S. J. Tucker

BY

ATTORNEYS.

UNITED STATES PATENT OFFICE.

SYLVESTER J. TUCKER, OF RICHMOND, VIRGINIA, ASSIGNOR TO HIMSELF ROBERT E. BLANKENSHIP, AND JOHN R. MACMURDO, OF SAME PLACE.

IMPROVEMENT IN REVENUE-REGISTERS.

Specification forming part of Letters Patent No. **202,305**, dated April 9, 1878; application filed February 25, 1878.

To all whom it may concern:

Be it known that I, SYLVESTER J. TUCKER, of Richmond, in the county of Henrico and State of Virginia, have invented a new and Improved Revenue-Register; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 is a vertial section through line *x x* of Fig. 2. Fig. 2 is a plan view with the top of the case removed, the bell in section, and one corner of case broken away to show parti-colored roller.

The object of my invention is to provide an improved registering device, designed more especially for registering alcoholic drinks in bars and restaurants wherever subject to a revenue tax, but adapted also to other purposes of numbering or counting.

The invention is an improvement upon that form of counting device in which a series of parallel disks carrying numbers upon their peripheries from one to ten, and as many notches, teeth, or pins upon their sides, are arranged in connection with a pawl, so that when from ten movements of said pawl a complete revolution of the first disk is made a pin on one of said disks strikes one of a set of secondary wheels, and by causing it to move one notch causes the second numbered disk, to which it is geared, to move also one notch and register the tens, and so on through the hundreds and thousands.

My improvement consists in rotating the numbered disks by a revolving arm upon a crank-shaft, which arm operates upon the numbered disks through the secondary gear-wheels; and in combining with the numbered disk a set of spring-pressed bevel-faced stop-pawls, which are pivoted upon the crank-shaft, and serve, by entering the notches on the numbered disk, not only to stop the disk at the right point, but, by reason of their beveled face and springs, cause also the disks to complete their full movement if the rotating arm should only partially turn the same.

Another feature of improvement consists in combining with the rotating crank-shaft a lever, sliding pawl, and polygonal roller bearing different-colored faces, which show through the outer case, which, in conjunction with an alarm-bell to be sounded simultaneously, serves to notify the public that the number has been registered, as hereinafter more fully described.

In the drawing, A represents the outer case of the register, having a hinged door, B, through which access is had to the interior, and which door is to be provided with such secure form of lock as will prevent any tampering with the mechanism within. In the door is fixed a glass window, C, through which the numbers on the faces of the numbered disks are visible. D are the numbered disks, arranged to rotate freely upon a shaft, E, and separated and spaced by intermediate washers *a*. These disks have upon one side ten notches or teeth, *b*, corresponding to the numbers upon their peripheries, which teeth are permanently geared into a corresponding set of secondary wheels, F, arranged upon a parallel shaft in the rear and similarly separated by washers. Above this secondary set of wheels is arranged in bearings in the case a shaft, G, having upon the outside a crank for turning the same. To this shaft, and within the plane of the first of the secondary wheels, is fixed an arm, H, which, as the shaft is rotated, strikes the first of the said secondary set of wheels, and in rotating it one notch causes the numbered disk (with which it is in gear by the teeth *b*) to be turned, so that the next succeeding number shall show through the window. After ten such movements of the first disk have been made a projection, *c*, upon the opposite side of the numbered disk from its teeth or notches strikes the second of the secondary wheels F, with which it is in line, and by causing it to move one notch causes also the second numbered disk to be moved one notch to register the tens, the said second of the secondary wheels F being geared permanently with the teeth *b* of the second numbered disk, but arranged to project laterally a sufficient distance to be struck by the projection *c*.

The turning of the third numbered disk is effected in a similar manner by the second to register the hundreds, and so on with the higher denominations.

With the exception of the arrangement of the crank-shaft above the set of secondary wheels, the device, as so far described, does not differ materially from that shown in the Patent No. 34,665.

By locating the crank-shaft at this point, however, its arm is made to operate upon the secondary wheels direct to operate the numbered disks, and the peripheries of the said numbered disks are thus left unencumbered, so as to permit a series of stop-pawls to be arranged upon the same. I are these stop-pawls, which correspond in number to the numbered disks, and are pivoted at their rear ends upon the crank-shaft and separated by washers. Said pawls have their faces beveled each way to a point, and are pressed into engagement with the teeth *b* of the numbered disks by individual springs *d*, coiled about a shaft, J. These pawls are thus made yielding or receding, so that as the numbered disks are turned by the secondary wheel their beveled rear faces and yielding character cause them to rise without obstructing the movement of the said numbered disks.

The object in beveling the forward faces of these stop-pawls is as follows: If, from the looseness of the gearing, the numbered disk should not be turned the required distance, this beveled face bears against one of the teeth *b* of the same, and the tension of the spring *d* is utilized to force the disk around, and thus complete its movement.

To give notice to both the eye and ear of the public that the number has been properly registered, an alarm-bell and colored signal are employed. K is the bell, which is fixed upon a stem inside of the case, and which is arranged to be sounded by a spring-actuated lever-hammer, *e*, deflected and suddenly released by a segmental cam, *f*, fixed on the crank-shaft. Upon the opposite end of this crank-shaft is fixed a ratchet-wheel, *g*, which, in connection with a pawl, *h*, prevents any backward movement of the said shaft. Said ratchet-wheel is provided with a lateral stud, *i*, which, as the shaft is revolved, strikes one end of a lever, *j*, whose upper end is pivoted to a slide-rod, *k*, held forward by a spring, *l*. As this lever is deflected by the rotation of the shaft the slide-rod *k* is retracted, and a gravity-pawl, *m*, pivoted in its forward end, is made to engage a ratchet, *n*, and turn the polygonal roller *o*. This roller is made with different-colored faces, and the same is arranged to show through a window in the case, so that when the number is registered the bell is sounded and a visible signal is made to further confirm correct registration.

Having thus described my invention, what I claim as new is—

1. The combination, with the numbered disk D and the secondary wheels F, constructed and arranged as described, of the crank-shaft G, having arm H, adapted to strike and turn the secondary wheel, and the spring-actuated and double-beveled stop-pawls I, pivoted upon the crank-shaft and arranged to engage with the teeth of the numbered disks, substantially as and for the purpose described.

2. The combination, with the crank-shaft of the registering device, of a polygonal roller, *o*, having different-colored faces, and a ratchet-and-pawl mechanism for operating the same, substantially as described.

The above specification of my invention signed by me this 13th day of February, 1878.

SYLVESTER J. TUCKER.

Witnesses:
SOLON C. KEMON,
CHAS. A. PETTIT.