(No Model.)

C. P. GOTT.

REGISTERING TURNSTILE.

No. 492,353. Patented Feb. 21, 1893.

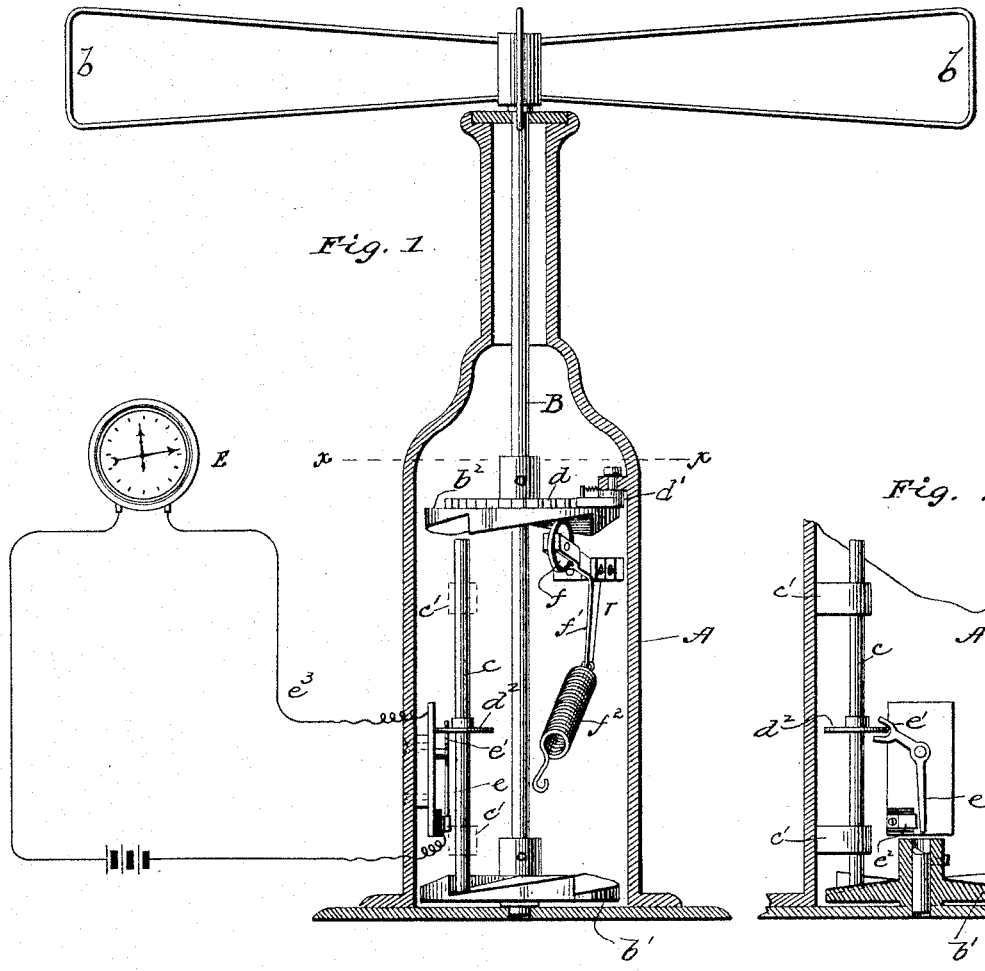

Fig. 1.

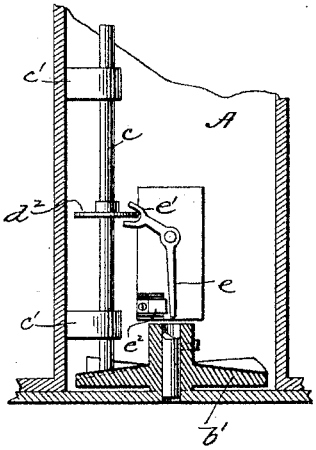

Fig. 2.

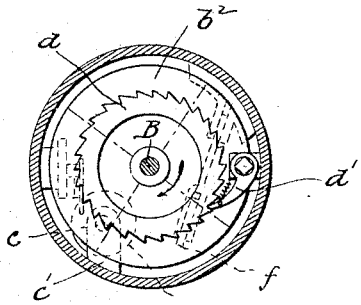

Fig. 3.

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CLARENCE P. GOTT, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND JOHN C. HAYS, OF SAME PLACE.

REGISTERING-TURNSTILE.

SPECIFICATION forming part of Letters Patent No. 492,353, dated February 21, 1893.

Application filed April 8, 1892. Serial No. 428,321. (No model.)

To all whom it may concern:

Be it known that I, CLARENCE P. GOTT, a citizen of the United States, residing at New York, in the county and State of New York, have invented certain new and useful Improvements in Registering-Turnstiles, of which the following is a specification.

My invention relates to turnstiles, the object being to provide a registering apparatus of this kind which shall be correct in its operation, will make one complete movement, and only one, each time it is operated and be cheap and simple in construction.

The invention consists of the details of construction which will be hereinafter fully described and pointed out in the claims.

In the accompanying drawings: Figure 1 represents a vertical section of the case of the turnstile, the interior mechanism being shown in elevation; Fig. 2 is a section of a portion of the apparatus taken at right angles to Fig. 1, and Fig. 3 is a section on line x, x, of Fig. 1.

Referring to the drawings by letter, A represents a case or hollow post inclosing the mechanism which controls the turnstile. The shaft of the turnstile is represented by B. It is stepped in the bottom of the case and projects through the top where it is fitted with the usual arms b, four in number, against which the body pushes when passing through the turnstile. Inside of the case the shaft B carries two disks b' and b^2 the opposite faces of which are provided with four inclined planes terminating in vertical shoulders and forming ratchets; the vertical shoulders on the two wheels face in opposite directions. Between the two wheels and inside of their peripheries is a vertical bolt or rod c loosely held in bearings c' c' and adapted to reciprocate in a vertical line. The lower end of this bolt rests normally on the ratchet b' while the upper end stands just clear of the upper ratchet. The two ratchet wheels are placed upon the shaft so that their vertical shoulders will stand in alternate radial planes. The object of this will appear in the statement of the operation. Upon the shaft B is also placed a ratchet wheel d which is engaged by a pawl d' to prevent the backward turning of the turnstile. Intermediate between its bearings, the rod c carries a finger or disk d^2 which plays in a fork e' on the end of the electric switch lever e. The lever is adapted to engage with a contact piece e^2 and complete an electric circuit e^3 which includes a registering apparatus E operated by each impulse of current.

f represents a roller having a soft rubber periphery bearing upon the ratchet face of disk b^2. It is mounted freely in the end of a bell crank lever f' pivoted to the case, and to the opposite end of the lever is attached a spring f^2 which is put under tension to make the roller press upon the ratchet wheel.

At starting, the parts are in the position shown; as the shaft B is turned in the direction indicated by the arrow Fig. 3, the bolt c is caused to slide upward by the inclined tooth of the ratchet b' upon which it rests. As it moves upward, and as the shaft moves around, the upper end of the bolt keeps parallel with the incline of a tooth on the upper ratchet and when the instrument has made a complete quarter turn the bolt normally falls from the highest point of the incline on the lower ratchet wheel up which it has traveled, to the lowest point of the next incline. If, however, the person passing the turnstile should go through hurriedly, the next vertical shoulder on the upper ratchet would strike the rod before it could fall and thus bring the turnstile to a stop. The space between the planes of these two shoulders is therefore made a little greater than the diameter of the bolt so that it will strike the upper shoulder very soon after leaving the lower shoulder, unless it should fall in the meantime. On the other hand, if the person moved very slowly and left the turnstile at the side and before it had made a complete quarter turn, the roller f would act upon the inclined surface of the tooth against which it was bearing and force the turnstile around a full quarter. If the turnstile is moved at a moderate or reasonable speed the roller will always stop it at the end of a quarter turn by running against a vertical shoulder. The roller would not suffice, though, in case the instrument was turned hurriedly as the momentum would carry the shoulder past the roller and therefore it is necessary to use the bolt c. One of the func-

tions, then, of the bolt *c* is to prevent the turnstile from making more than a quarter turn when it is moved quickly.

From the above it will be seen that the mechanism inside the hollow post controls the turnstile when it is turned by a person passing through; the bolt *c* prevents the turnstile from rotating too far when it is pushed violently and the roller serves the double purpose of stopping the turnstile at the proper point when it is pushed in a gentle or reasonable manner, and forces the turnstile along to the end of its movement when the person passing through does not do that work. The bolt moves up and down during each quarter turn and closes and opens the circuit of the register once during that period; the result is a correct registration of the number of persons passing through the turnstile.

Having thus described my invention, I claim—

1. In a turnstile, the combination of the main rotary shaft, two wheels thereon with ratchet teeth on their opposite faces and a rod or bolt reciprocating between the ratchets and actuated by one of them for the purpose set forth.

2. In a turnstile, the combination of the main rotary shaft, two wheels thereon with ratchet teeth on their opposite faces, and a rod or bolt reciprocating between the ratchets and actuated by one of them, the shoulders of the ratchets on the two wheels being located in alternate radial planes for the purpose set forth.

3. In a turnstile, the combination of the main rotary shaft, two ratchet wheels thereon, a rod or bolt reciprocating between the ratchets and actuated by one of them and a brake retarding the movement of the shaft for the purpose set forth.

4. In a turnstile, the combination of the main rotary shaft, two ratchet wheels thereon, a rod or bolt reciprocating between the ratchets and actuated by one of them and an electric circuit closer operated by the rod substantially as described.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

CLARENCE P. GOTT.

Witnesses:
FRANK S. OBER,
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