

(No Model.)

C. P. GOTT.
TURNSTILE.

No. 503,698.

Patented Aug. 22, 1893.

Fig. 1.

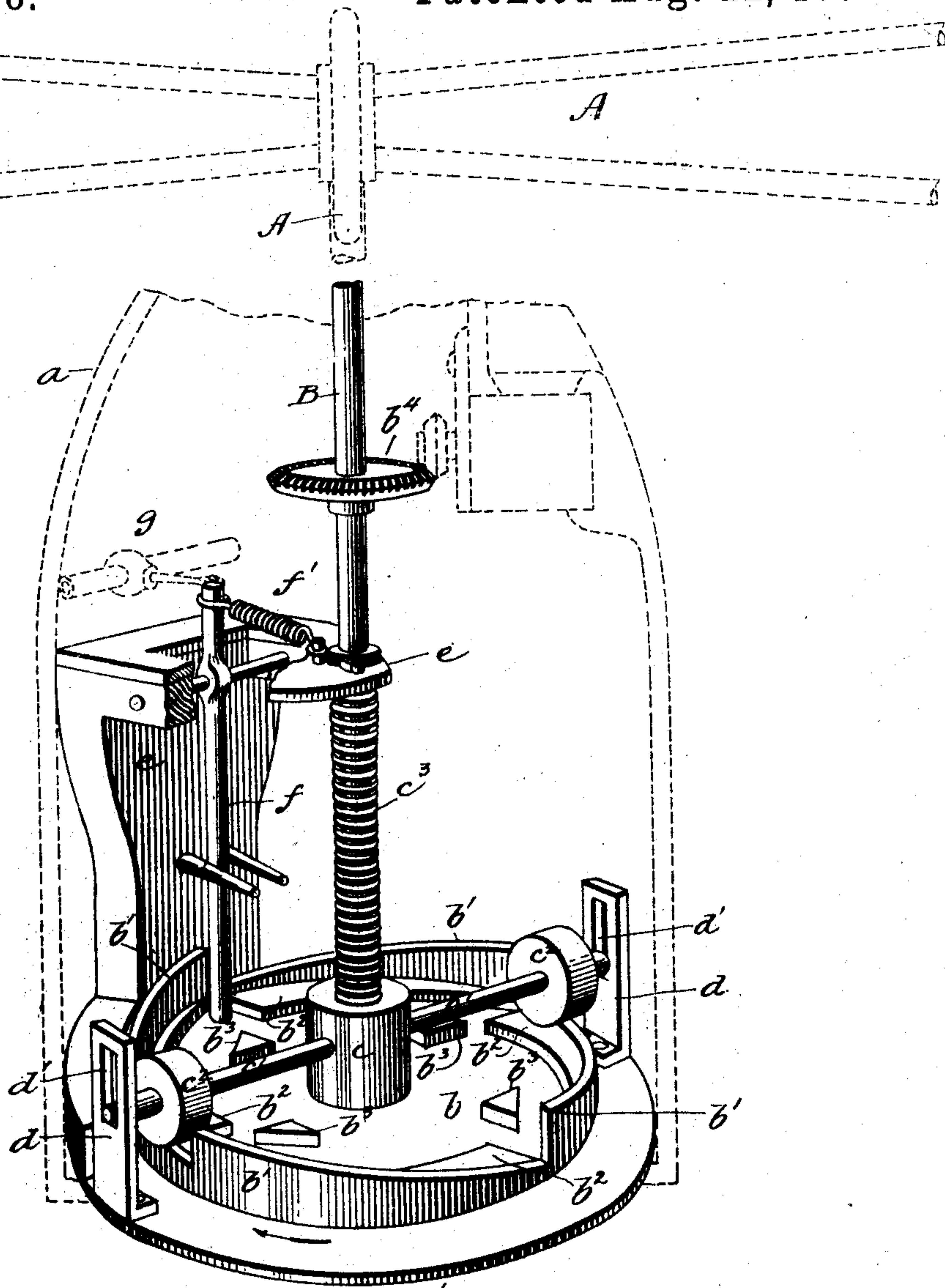
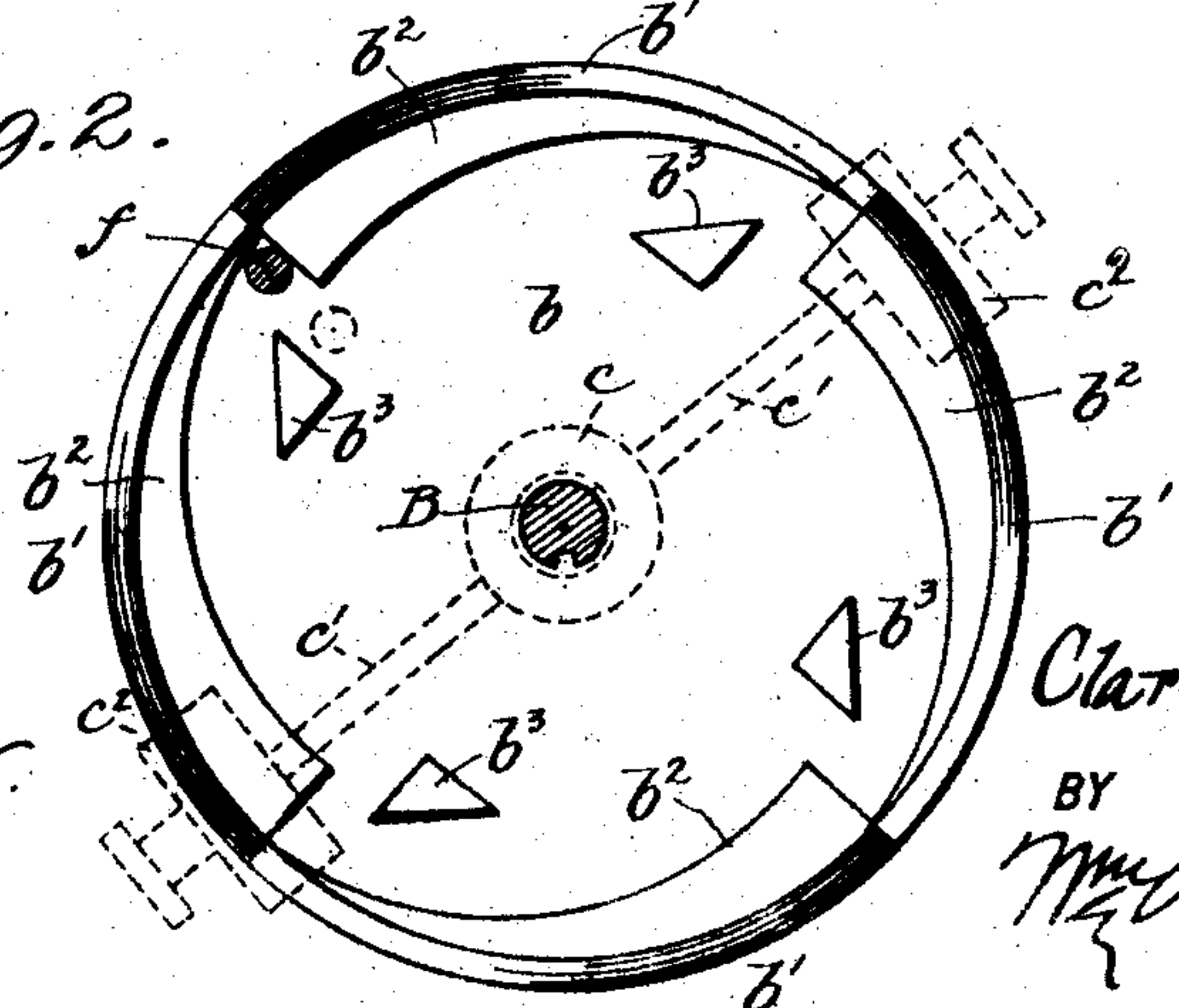


Fig. 2.



WITNESSES:

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TURNSTILE.

SPECIFICATION forming part of Letters Patent No. 503,698, dated August 22, 1893.

Application filed December 30, 1892. Serial No. 456,840. (No model.)

To all whom it may concern:

Be it known that I, CLARENCE P. GOTT, a citizen of the United States, residing at Bayonne, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Turnstiles, of which the following is a full, clear, and exact description.

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

The invention consists of the details of construction which will be hereinafter described and claimed.

In the accompanying drawings, Figure 1 represents a perspective view of the apparatus controlling the turnstile, the inclosing case or post and the arms being shown in dotted lines. Fig. 2 is a plan of a double ratchet wheel carried by the shaft.

Referring to the drawings by letter, A represents the arms of the turnstile, of which there are four.

a represents the post above which the arms are mounted; this post is hollow and incloses the controlling apparatus constituting my invention.

B represents a vertical shaft carrying at its upper end the arms A and at its lower end a horizontal wheel or disk b. Both of these devices are tight on the shaft, and the disk is located at its lower end. The disk is provided with four vertical ratchet teeth b' each occupying one quarter of the periphery of the disk. It is also provided with four other ratchet teeth b² which are horizontally disposed, that is, they are at right angles to the teeth b'. They, however, correspond in length and position with the latter. Upon the face of the disk and just beyond the end of each tooth b² is placed a lug or stop b³; the object of which will appear hereinafter. Upon the shaft B is placed a loose hub c having two arms c' projecting therefrom in a diametrical line and with their outer extremities passing into slots d' located in fixed brackets d. Each arm c' carries a roller c² which rolls upon the upper edges of the ratchet teeth b'. The hub c is pressed downward con-

tinuously by a spring c³ surrounding the shaft and bearing at its lower end against the hub and at its upper end against a fixed portion of the frame e of the turnstile. In this frame e there is also pivoted a bar f which stands in a vertical position with its lower end held against the edges of the ratchet teeth b² by a spring f'. This bar is connected with and operates a valve g which controls a supply of compressed air, operating a counting mechanism; or this bar may make and break an electric circuit, or operate in any other manner to control a registering apparatus; if desired also a registering or counting apparatus may be operated direct from shaft B through a gear wheel b⁴ in the manner indicated.

In registering turnstiles it is necessary that the main shaft should be turned a certain prescribed distance each time a person passes. It should be constructed so that if pressure is removed after it has been pushed a part of the way round, it will automatically continue its movement until the prescribed movement is accomplished. My invention fulfills all these conditions and its operation is as follows: The normal positions of the parts of the turnstile are shown in the drawings. It will be observed that the rollers c² are resting at the bottom of one pair of the teeth and against the vertical shoulders of the next pair. It will also be seen that the bar f is standing against one of the shoulders of the teeth b²; the shaft is therefore prevented from turning in one direction. When a person passes through the turnstile the arms A and the disk b are turned in the direction indicated by the arrow. A certain amount of pressure must at first be applied to raise the rollers c² against the power of the spring c³ and force the elevated portions of the teeth b' under the rollers. When this is done the pressure of the rollers c² upon the inclined edges of the teeth will cause the turnstile to continue its rotation without further aid from the person passing through and it will move gently around a full quarter turn, or until the rollers are stopped by the next succeeding shoulders of the teeth b'. While this movement is being accomplished the lower end of the bar f is riding against the edge of one of the

teeth b^2 and is forced toward the center of the disk b until the disk comes to a stop when the end of the bar drops from the end of the tooth into the position indicated in the drawings. In this movement the valve g or other registering apparatus is operated. Now, in case the person passing through the turnstile rushes violently against the arm of the turnstile, the turnstile will be prevented from making more than a quarter turn by the arm f striking the lug b^3 before it has time to fall back into the position shown in Fig. 1.

It will be seen that with the two rollers c^2 , acting with the same pressure at diametrically opposite points on the wheel, the movement of the latter caused thereby, will be more positive and will require less aggregate force than if there was but one roller acting on one side of the wheel; as in the latter case there would be a tendency to tip the wheel and cause friction at its bearings.

Having described my invention, I claim—

1. In a turnstile, the combination of the main rotary shaft carrying the arms, a disk or wheel rotated thereby, a series of ratchet teeth on said disk and a pair of spring pressed rollers bearing upon said ratchet teeth at diametrically opposite points and tending to rotate the shaft, substantially as described.

2. In a turnstile, the combination of the main rotary shaft carrying the arms, a disk or wheel rotated thereby, a series of ratchet teeth on said disk and a pair of spring pressed rollers bearing upon said ratchet teeth and tending to rotate the shaft, a second series of ratchet teeth on said wheel and a pivoted arm resting against the edges of said teeth for the purpose set forth.

3. In a turnstile the combination of the main rotary shaft carrying the arms, a disk or wheel rotated thereby, a series of ratchet teeth on said disk and a pair of spring pressed rollers bearing upon said ratchet teeth and

tending to rotate the shaft, a second series of ratchet teeth on said wheel and a pivoted arm resting against the edges of said teeth, and stops carried by the disk and located slightly beyond the respective ends of the second series of ratchet teeth and adapted to strike the end of said arm to stop the movement of the turnstile as described.

4. In a turnstile, the combination of the main rotary shaft carrying the arms, a disk or wheel rotated thereby, a series of ratchet teeth on said disk and a pair of spring pressed rollers bearing upon said ratchet teeth and tending to rotate the shaft, a second series of ratchet teeth on said wheel and a pivoted bar resting against the edges of said teeth, and stops carried by the disk and located slightly beyond the respective ends of the second series of ratchet teeth and adapted to strike the end of said arm to stop the movement of the turnstile, and a registering apparatus operated by said arm, substantially as described.

5. In a turnstile, the combination of a main shaft carrying a disk or wheel b , the latter provided with ratchet teeth b' , a loose hub upon the shaft, said hub carrying two arms c' provided with rollers c^2 bearing upon said ratchet teeth b' and a spring c^3 forcing the rollers against the ratchet teeth for the purpose set forth.

6. In a turnstile, the combination of the main shaft carrying a wheel or disk b provided with ratchet teeth b^2 and stops b^3 , and the pivoted arm f resting against said ratchet teeth and adapted to impinge against the stops b^3 to stop the movement of the turnstile, substantially as described.

In testimony whereof I subscribe my signature in presence of two witnesses.

CLARENCE P. GOTT.

Witnesses:

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