A. F. SWAN.

TURNSTILE.

No. 188,437. Patented March 13, 1877.

Fig: 1.

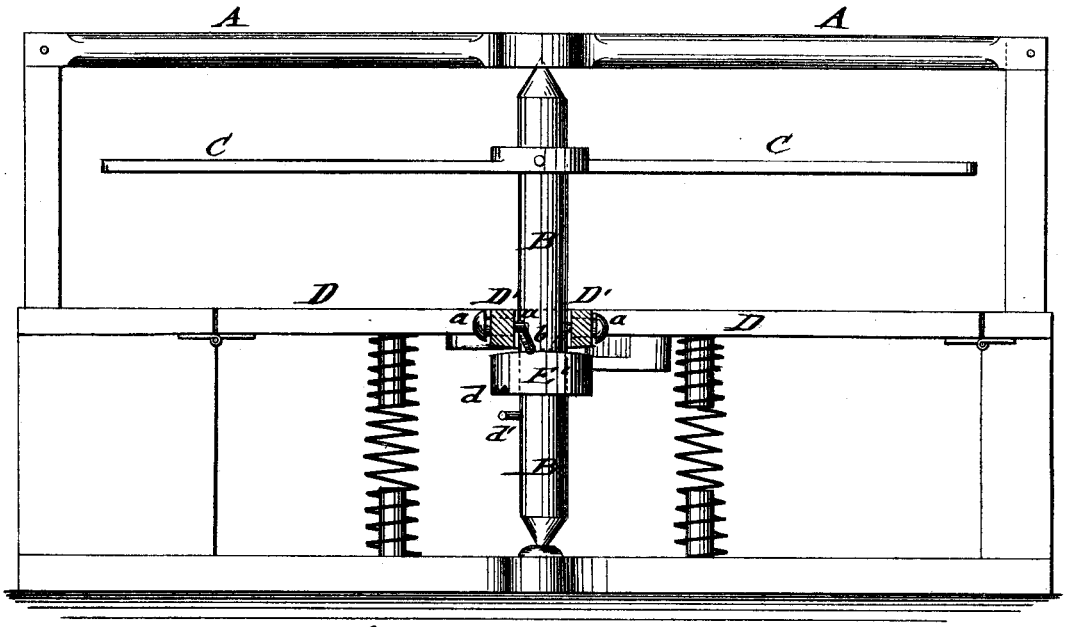

Fig: 2.

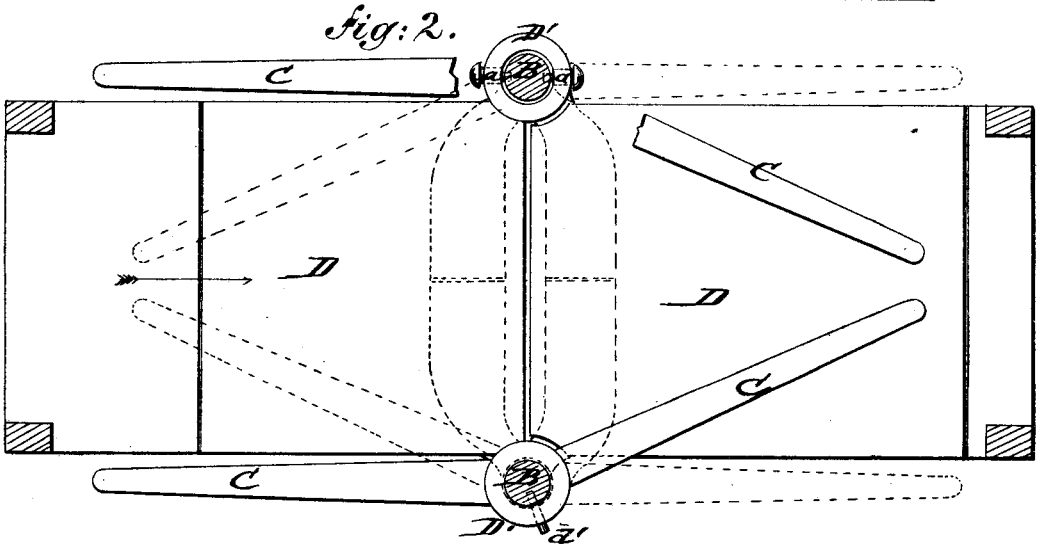

Fig: 3.

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ALFRED F. SWAN, OF HOBOKEN, NEW JERSEY.

IMPROVEMENT IN TURNSTILES.

Specification forming part of Letters Patent No. **188,437**, dated March 13, 1877; application filed December 18, 1876.

To all whom it may concern:

Be it known that I, ALFRED F. SWAN, of Hoboken, in the county of Hudson and State of New Jersey, have invented a new and Improved Automatic Turnstile, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a side elevation, partly in section, of my improved automatic turnstile; Fig. 2, a top view of the same, and Fig. 3 a detail view of the turning-standard.

Similar letters of reference indicate corresponding parts.

This invention has reference to an improved system of automatically-operating turnstiles for ferry-houses, fair-grounds, exhibition-buildings, and similar purposes, by which the passage of the turnstile is facilitated and made less inconvenient and obstructive, so that the person passing through the turnstile becomes hardly aware of the fact, while he is prevented from returning through the turnstile by a very simple locking mechanism.

The invention consists of parallel guide-rails, with central pivoted side standards, having rigid horizontal arms, of which one set extends parallel to the other at an oblique angle to the longitudinal axis of the stile.

The side standards and arms are revolved and locked by hinged and spring-acted platforms, which are jointly worked by the weight of the person passing through the turnstile. One platform operates the standards by ring-shaped sleeves, with pins entering spiral recesses of the same. The second platform locks the standards by recesses binding on stop-pins, jointly with the first platform or singly, to prevent the return of the person.

In the drawing, A represents parallel guide-rails sufficiently apart to admit the convenient passage of any person with children, packages, baskets, and bundles between the same.

At or near the center of each guide-rail A is arranged a vertical standard, B, which turns, by its conically-tapering or pointed top and bottom ends, in bearings or seats of the rails, and of suitable base-supports.

To the side standards B are rigidly secured, at suitable height from the floor, horizontal arms C, of which the outer or entrance arms are in normal position parallel to the guide-rails and to the longitudinal axis of the turnstile, while the opposite or exit arms are placed at an oblique angle to the longitudinal axis.

The pivoted side standards B are operated to turn in their bearings by means of a hinged and spring or lever-acted platform, D, below the parallel entrance-arms C of the standards.

The platform D connects, by sleeves D′ around the standards, and having inwardly-projecting pins *a*, with spiral recesses *b* of the standards A, the recesses being of such length that, on depressing the platform, the standards are turned sufficiently to throw the entrance-arms inward to about the same angle toward each other and the guide-rails, as the opposite or exit arms have retained toward each other. The exit-arms are simultaneously swung outwardly into a position parallel to the longitudinal axis.

Simultaneously with the entrance-platform D a second hinged and spring-acted platform, E, placed symmetrically thereto, is operated by the sleeves D′, which bear on sliding sleeves E′ of platform E. The sleeves E′ are arranged below the sleeves D′, and have two adjoining recesses, *d*, at their under sides, of which the inner recesses bind on projecting stop-pins *d′* of the turning-standards B, and lock thereby the arms in position as long as either platform is depressed.

The under side of the upper sleeves D′ and the upper side of the lower sleeves E′ are slightly convexed to admit the ready acting of the sleeves upon each other. The depression of the entrance-platform lowers both sleeves, turns the standards and locks the lower sleeves by the pressure of the inner recesses on the stop-pins of the standards, so that the swinging arms are rigidly retained in their position, with entrance-arms closed and exit-arms opened, as described.

When the person has passed the exit-arms, so that the platform is relieved from the weight of the same, the platforms are simultaneously raised by the action of their springs or weighted levers, and the swinging arms brought back into their normal position, with

the entrance-arms open and exit-arms closed, ready for the passage of another person.

The return of any person who has passed the turnstile is prevented by the depression of the exit-platform E, caused by stepping thereon, which presses the outer recesses *d* on the stop-pins *d'*, without, however, causing the turning of the standards.

As the standards are thereby firmly held in position, the arms cannot be opened, but prevent the return passage of any person in effective and reliable manner.

It is preferred, for the efficient working of the turnstile, that the main platform below the entrance-arms be hinged inside of the ends of these arms, while the platform below the exit-arms is hinged at the outside of the same. The entrance-arms are thereby only closed when the person presses with his full weight on the entrance-platform, and the exit-arms are kept open until the person has passed beyond the same. This construction of turnstile facilitates the passage of persons and admits the full control of the same by arranging a suitable registering mechanism in connection with the standards. The platforms are depressed in a manner hardly noticeable to the person stepping thereon, and are raised automatically, giving not the slightest feeling of insecurity or annoyance, while admitting an easier passage than the present revolving turnstile in use.

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

1. A turnstile, consisting essentially of horizontally-swinging entrance and exit arms C C, vertical shafts B B, and movable platforms D E, all constructed and relatively arranged, substantially as shown, to operate in the manner set forth.

2. An automatic turnstile, formed of horizontally-swinging entrance and exit arms, secured at such relative position to each other and to the longitudinal axis of the passage that the depression and release of the platforms, by the person passing over the same, respectively closes the entrance-arms and opens the exit-arms, and then closes the exit-arms and opens the entrance-arms, substantially as specified.

3. The combination of the pivoted side-standards B, having horizontal entrance and exit arms, arranged respectively parallel to the axis of the passage and at oblique angles thereto, with the hinged and spring-acted platform D engaging and turning the standards to such an extent that the entrance-arms are placed at an angle to each other, while the exit-arms assume a parallel position, substantially as described.

4. The combination of the hinged and spring-acted platform D, having sliding sleeves fitting to side standards B, and inwardly-projecting pins *a*, with spiral recesses *b* of standards A, substantially as specified.

5. The combination of the hinged and spring-acted platforms D and E, having sleeves D' and E' sliding on standards B, with each other and with locking devices of the standards, to depress the platforms simultaneously and lock standards in turned position, substantially as set forth.

6. The hinged and spring-acted platforms D and E, the latter having sliding sleeves E', with bottom recesses *d*, in combination with the projecting stop-pins *d'* of standards B, substantially as and for the purpose set forth.

7. The hinged and spring acted platform E, having sleeves E' sliding along standards B and bottom recesses *d*, in combination with stop-pins of standards B, to lock standards in position before turning when depressing the platform, for the purpose of preventing return of persons having passed the turnstile, substantially as shown and described.

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