

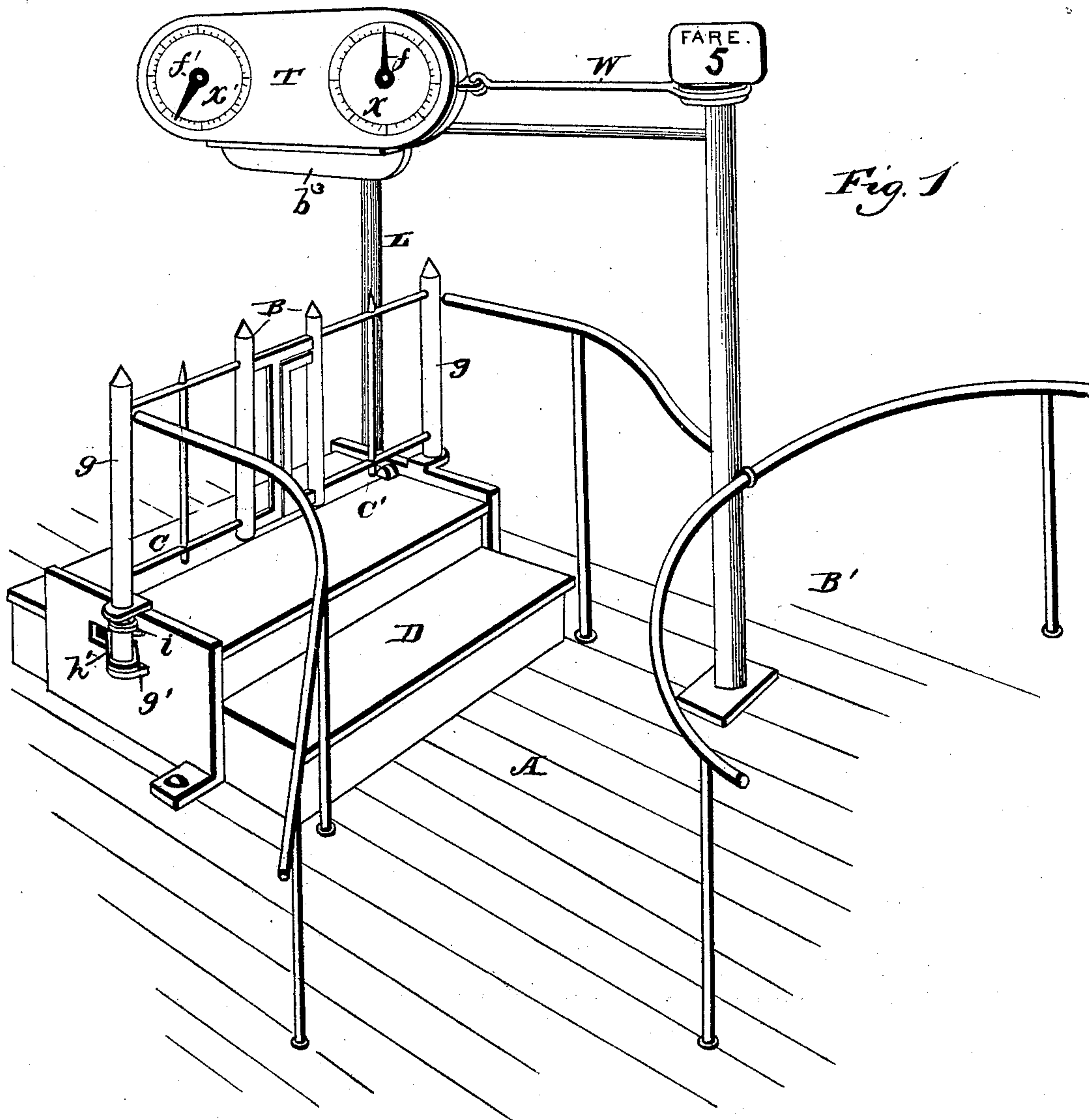
(Model.)

3 Sheets—Sheet 1.

G. D. PAUL.
PASSENGER REGISTER.

No. 249,542.

Patented Nov. 15, 1881.



WITNESSES

Geo. D. Seymour.
Hermann Morau.

INVENTOR

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by Bequa and Bequa.

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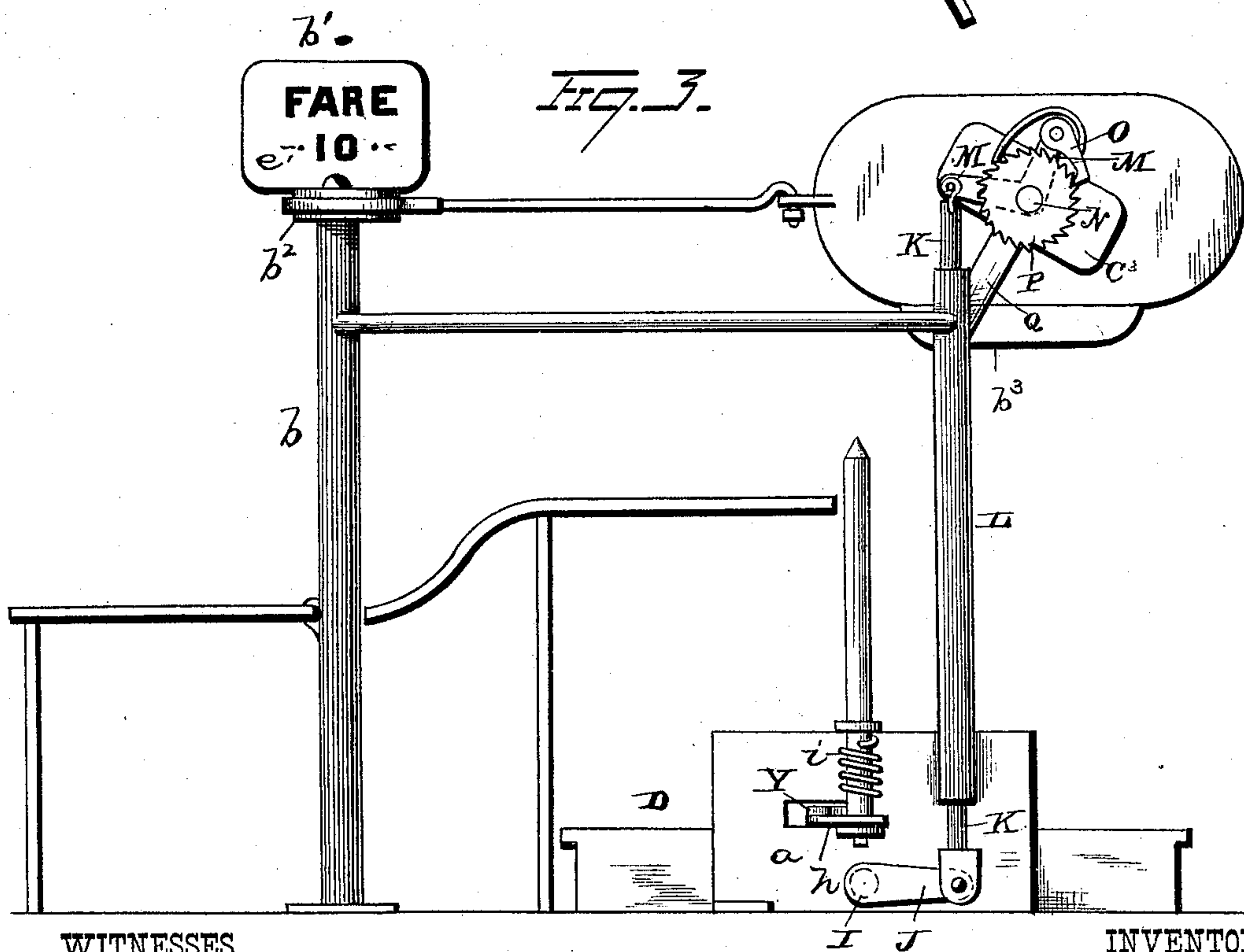
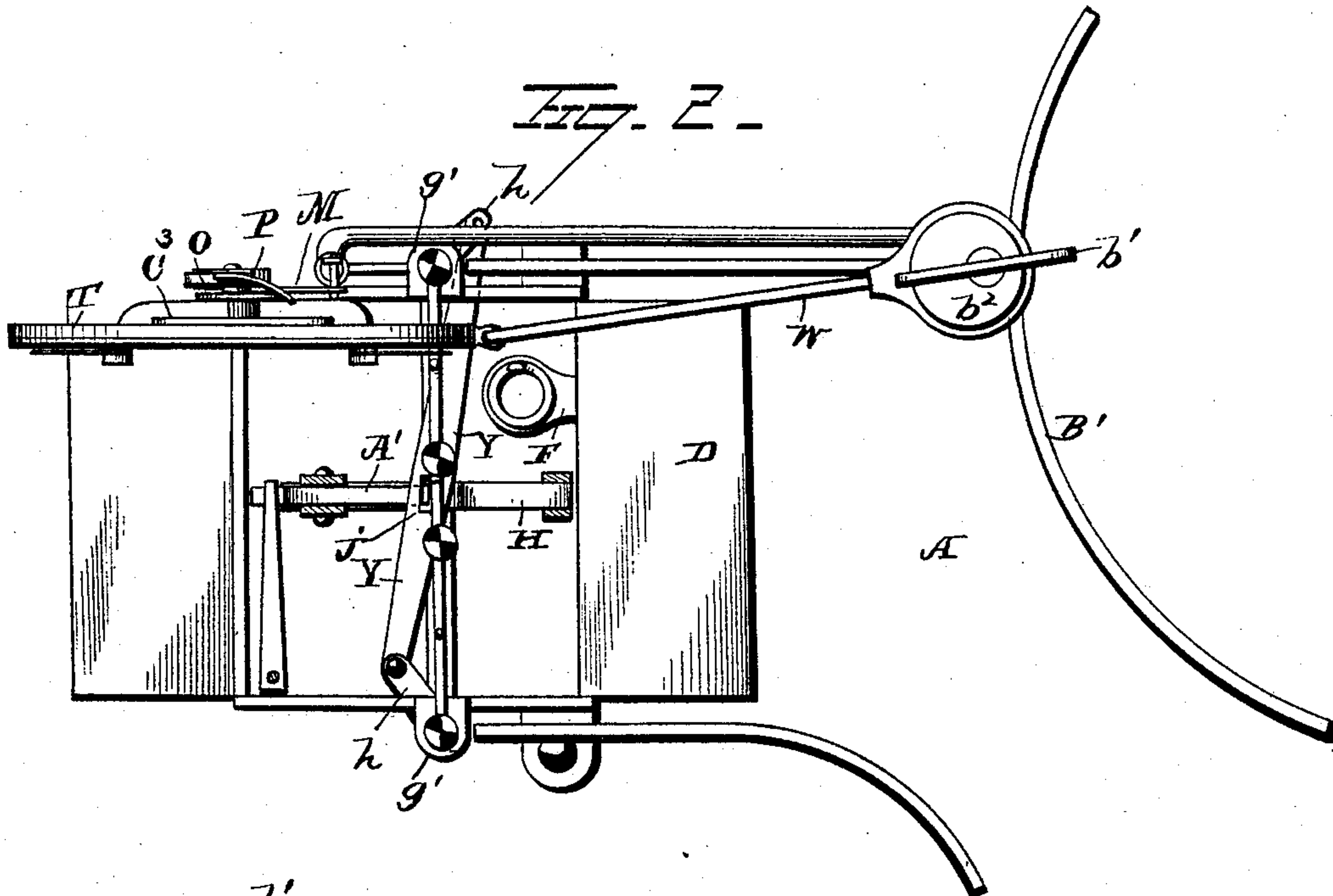
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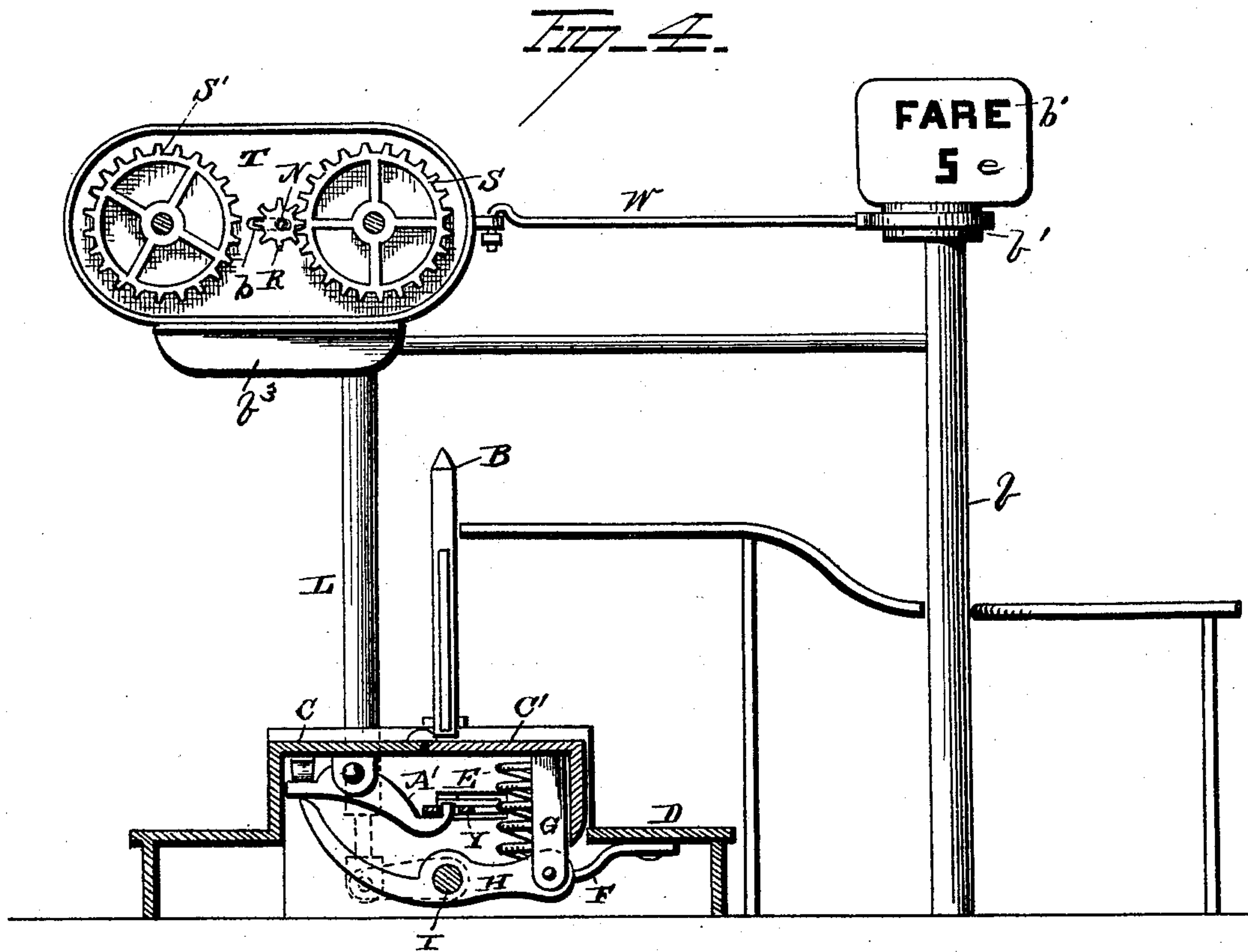
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UNITED STATES PATENT OFFICE.

GEORGE D. PAUL, OF NEW YORK, ASSIGNOR TO HIMSELF, GEORGE S. TERRY,
OF SAME PLACE, AND HENRY E. REDDISH, OF BROOKLYN, N. Y.

PASSENGER-REGISTER.

SPECIFICATION forming part of Letters Patent No. 249,542, dated November 15, 1881.

Application filed August 22, 1881. (Model.)

To all whom it may concern:

Be it known that I, GEORGE D. PAUL, of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Passenger-Registers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention relates to an improvement in apparatus for registering the number of persons passing over a hinged platform situated in a restricted passage to reach a ferry-boat or train, the object of the same being to provide accurate means of ascertaining at a glance the exact number of passengers that have boarded the train and the exact amount of passage-money taken in at the box, thereby doing away with the ticket system and fare-boxes in use on the elevated roads. With these ends in view my invention consists in certain details of construction and combinations of parts, as will be more fully explained, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of my improved device. Fig. 2 is a plan view with the top of the step removed. Fig. 3 is a side view. Fig. 4 is a vertical sectional view taken through the indicator and platform.

A represents a passage-way, sufficiently wide for one person to pass through, leading directly to the gates B, which latter can be set on or over a raised platform or immediately on the floor, as desired. In the present instance I have represented the gates B mounted on the platform C, which latter are reached by one step, D. The inner end, C', of this platform C, or that portion inside of the passage-way, is pivoted at one end to the side walls of the platform, and is held up in position when there is no pressure thereon by a spring, E, adapted to bear on the under side of the pivoted platform C' and the upper side of an arm, F, secured in any desired manner beneath

the said platform. This hinged platform C' is provided on its under surface with a depending arm, G, the lower end of which is pivotally connected to the operating-lever H, the latter being rigidly secured to the rock-shaft I. The end of the rock-shaft I on the indicator side of the platform projects outside of the side wall, a, and is provided on this projecting end with a crank-arm, J, which latter is connected at its outer end to the sliding rod K. This sliding rod works in the hollow standard L, and is connected at its upper end to one arm of the bell-crank lever M, which latter is journaled on the shaft N. The opposite end of this bell-crank lever M is provided with a spring-pressed pawl, O, adapted to engage with the ratchet-wheel P rigidly secured to the rear end of the shaft N, which latter is journaled in a suitable bearing at the upper end of the inclined arm Q, and is provided on its front end with the small cog-wheel R, adapted to mesh with either of the wheels S or S', journaled at a suitable distance apart in the sliding frame T, the latter being held up in position on the support b³ by the shaft N, which passes through an oblong slot in the frame T and is clamped between the plate C³ and cog-wheel R. b is an upright post, having an indicator, b', pivoted thereto and an eccentric, b², rigidly secured to the under side of the indicator. This eccentric b² is provided with peripheral groove, in which the outer end of strap W works, while the opposite end of the said strap is connected to the inner end of the sliding frame T. When one face of the indicator or sign b' is turned toward the passengers the correspondingside of the double dial-indicator X X' is in engagement with the small cog-wheel R, and is moved thereby, while the other indicator or pointer is at rest.

As before stated, the sliding frame T is provided with two dials, X X', either of which can be operated by the wheel R, while the sign b' is provided with two faces to represent two different fares. Suppose the face e on the indicator b' to represent five-cent fares and the face e' ten-cent fares. Now, if the face of the sign e, having five-cent fares thereon, be turned outward toward the public the frame T will be

moved outward, carrying with it the wheels S
 and S' secured thereto, which causes the wheel
 R to mesh with the wheel S, which operates the
 pointer *f* rigidly secured to the said wheel, and
 5 causes it to register one on the dial for every
 time the hinged platform C' is depressed.
 When the sign *b'* is turned so that the side *e'*,
 having ten-cent fares thereon, will be toward
 the public, the frame T will be drawn inward
 10 or toward the said sign, thereby causing the
 wheel S' to register with the wheel R and move
 its pointer *f'* on the ten-cent indicator once for
 every time the step is depressed.

To prevent passengers from stepping over
 15 the pivoted or hinged platform C' without de-
 pressing the same I provide spring-actuated
 gates B, adapted to remain closed and locked
 until the hinged platform C' is depressed, which
 unlocks the gates and allows them to be pushed
 20 open while the person remains standing on the
 hinged platform. These gates are pivoted by
 their posts *g* in suitable bearings, *g'*, at the sides
 of the platform, and each post is provided, near
 its lower end, with an arm, *h*, extending out-
 25 ward therefrom in different directions. The ex-
 tremities of these arms *h* are connected togeth-
 er by the diagonal rod Y, which causes the
 gates to move simultaneously in the same di-
 rection—that is to say, it causes both gates to
 30 swing outward and inward together. The gate-
 posts are encircled by the springs *i* adapted to
 constantly tend to close them.

The diagonal rod Y, above referred to, is pro-
 vided centrally with an opening, *j*, within which
 35 the curved end of the spring-pressed dog A'
 fits when the gates are closed and pressure re-
 lieved from the hinged platform. When press-
 ure is brought to bear on the hinged platform
 C' the free end of the operating-lever H bears
 40 upon the free end of the dog A' and withdraws
 the curved end of the said dog from the hole *j*
 and allows the gates to be opened.

My invention is especially useful for elevated
 railways and ferry companies where different
 45 fares are charged throughout the day, as it en-
 ables the person in charge to tell at a glance the
 exact number of five and ten cent fares taken
 in on a certain trip or between certain times.

By the use of this improvement a great sav-
 50 ing is made by dispensing with tickets, fare-
 boxes, and attendants upon the fare-boxes, as
 every step on the platform C' is transmitted to
 the pointers on the indicators.

The distance between the wheels S and S' is
 55 sufficient to allow the wheel R to mesh with
 one without interfering with the other, but not
 sufficient for it to rest between them without
 meshing with one or the other.

In the drawings, B' represents the office
 60 where the passenger pays his fare. After the
 fare is paid he steps into the passage-way A,
 which latter is just wide enough for one person
 to pass through with ease, thereby preventing
 two from stepping on the platform at one time
 65 and only registering one on the indicator. In
 the present instance I have shown the hinged

platform raised above the level of the floor, in
 order to more absolutely protect it against two
 persons placing their feet on it at the same
 time; but it can be placed on the same level 70
 with the floor, if so desired.

Instead of using mechanism for locking the
 gates every time they are closed, it can be dis-
 pensed with, the force of the spring being suf-
 ficient for all purposes. So, also, can one gate 75
 or a turnstile be used with equally good ef-
 fects, the arms of the turnstile preventing the
 next succeeding person from stepping on the
 platform until the preceding person has stepped
 off. 80

It is evident that my improved arrangement
 for operating the pointers may be used on car-
 steps or passage-ways with a single dial where
 only one fare is charged, so I would have it
 understood that I do not limit myself to the 85
 exact construction of parts shown and de-
 scribed, but consider myself at liberty to make
 such changes as come within the spirit and
 scope of my invention.

Having fully described my invention, what 90
 I claim as new, and desire to secure by Letters
 Patent, is—

1. In an automatic passenger-register, the
 combination, with a hinged platform, of a slid-
 ing frame having two dials, two pointers, and 95
 two wheels secured thereto, and intervening
 mechanism for operating either pointer when
 pressure is brought to bear on the said hinged
 platform, substantially as set forth.

2. In an automatic passenger-register, the 100
 combination, with a hinged platform, of a slid-
 ing frame having two dials, two pointers, and
 two wheels secured thereto, two gates secured
 over the said hinged platform, and interven-
 ing mechanism for unlocking both gates and 105
 operating either pointer when pressure is
 brought to bear on the hinged platform, sub-
 stantially as set forth.

3. In an automatic passenger-register, the 110
 combination, with a hinged platform, of a slid-
 ing frame having two dials, two wheels, and
 two pointers secured thereto, two gates se-
 cured over or at one end of the said hinged
 platform, and a pivoted sign or indicator hav-
 ing figures or letters on opposite faces and an 115
 eccentric below it, the said eccentric being
 connected to the said sliding frame by a suit-
 able strap, and mechanism connecting the
 hinged platform with the said sliding frame,
 and gates whereby the pointer on one indi- 120
 cator is made to move one space, and the gates
 to be unlocked when pressure is brought to
 bear on the hinged platform, substantially as
 set forth.

4. The combination, with a sliding frame 125
 having two dials, two wheels, and two point-
 ers secured thereto, as described, and a small
 wheel secured to a shaft inside of the sliding
 frame, between the two wheels, of a swiveled
 sign or indicator having letters or figures on 130
 its opposite faces, an eccentric rigidly secured
 to the said sign, and a strap connecting the

sign to the sliding frame, whereby movement of the sign is transmitted to the sliding frame, substantially as set forth.

5 5. The combination, with the hinged gates, each having an arm extending outward in different directions, the said arms being connected together by a diagonal bar having a central opening, of the hinged platform having an arm depending therefrom, the lower end of the
10 said arm being pivotally secured to the operating-lever, which latter is rigidly secured to a rock-shaft, and a spring-pressed dog having a bent extremity adapted to fit in the opening in the diagonal bar and be released therefrom
15 by the operating-lever when pressure is brought to bear on the hinged platform, substantially as set forth.

6. The combination, with the hinged platform C', arm G, operating-lever H, rock-shaft
20 I, sliding rod K, bell-crank M, and spring-pressed pawl O, of the ratchet-wheel P, shaft

N, cog-wheel R, and a sliding frame having two dials, two pointers, and two wheels, between which the wheel R rests, substantially as set forth.

25 7. The combination of the short shaft N, having a ratchet-wheel at one end and a cog-wheel at the other end, of a sliding frame provided with two dials, two pointers, and two wheels, the space between the two wheels being of
30 such width as to allow the small cog-wheel to engage with one wheel of the sliding frame without interfering with the other, but not sufficient to allow the said cog to move without
35 engaging one of the said wheels, and consequently indicating it on the dial.

In testimony that I claim the foregoing I have hereunto set my hand.

GEORGE D. PAUL.

Witnesses:

EDMUND E. PRICE,
GILBERT J. MCGLOIN.