

No. 618,185.

Patented Jan. 24, 1899.

A. C. & C. T. OSENBACH & W. H. BREGENZER.

STATION INDICATOR.

(No Model.)

(Application filed Feb. 26, 1898.)

2 Sheets—Sheet 1.

Fig. 1.

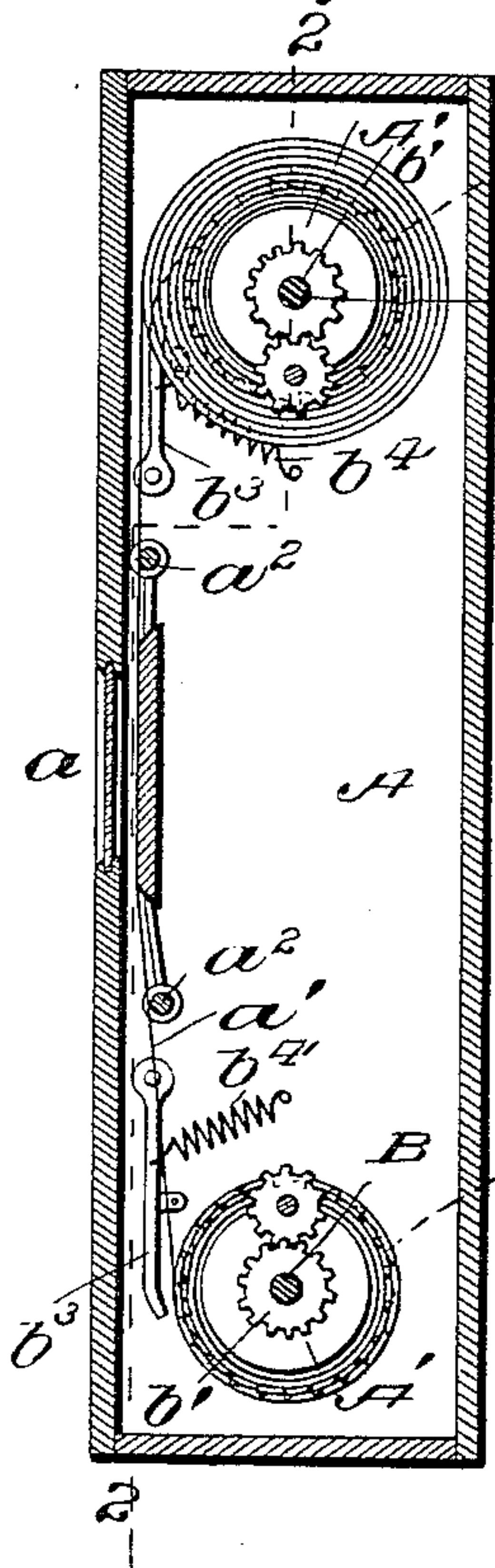


Fig. 2.

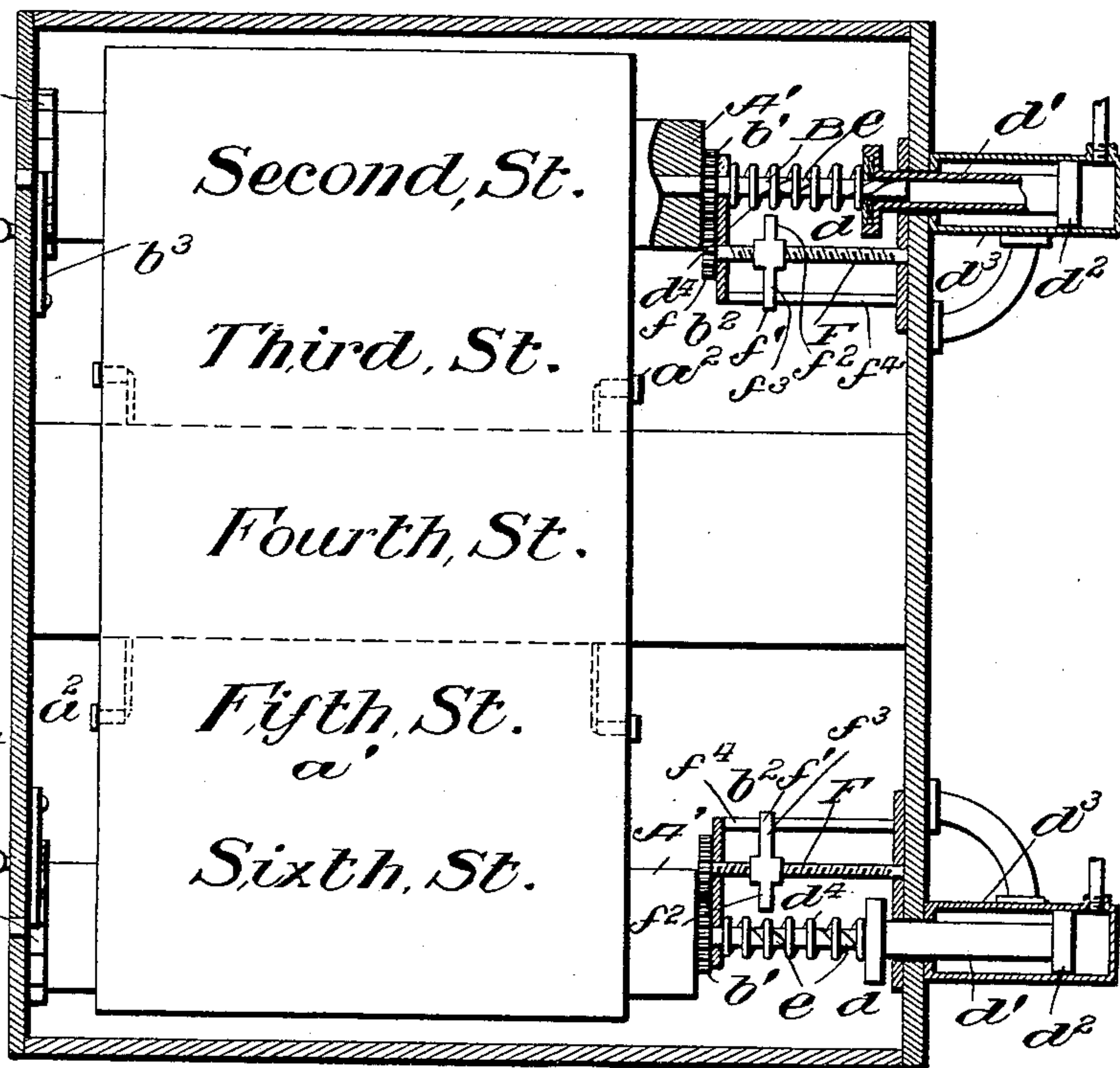


Fig. 3.

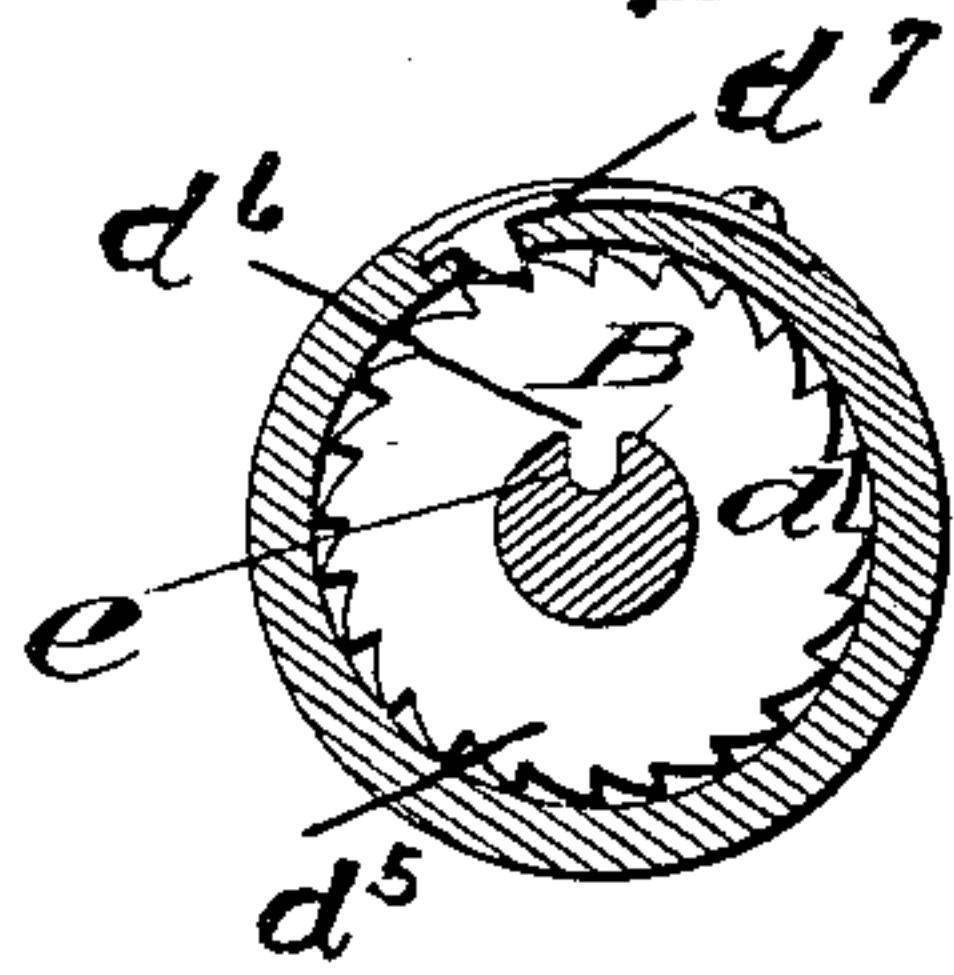
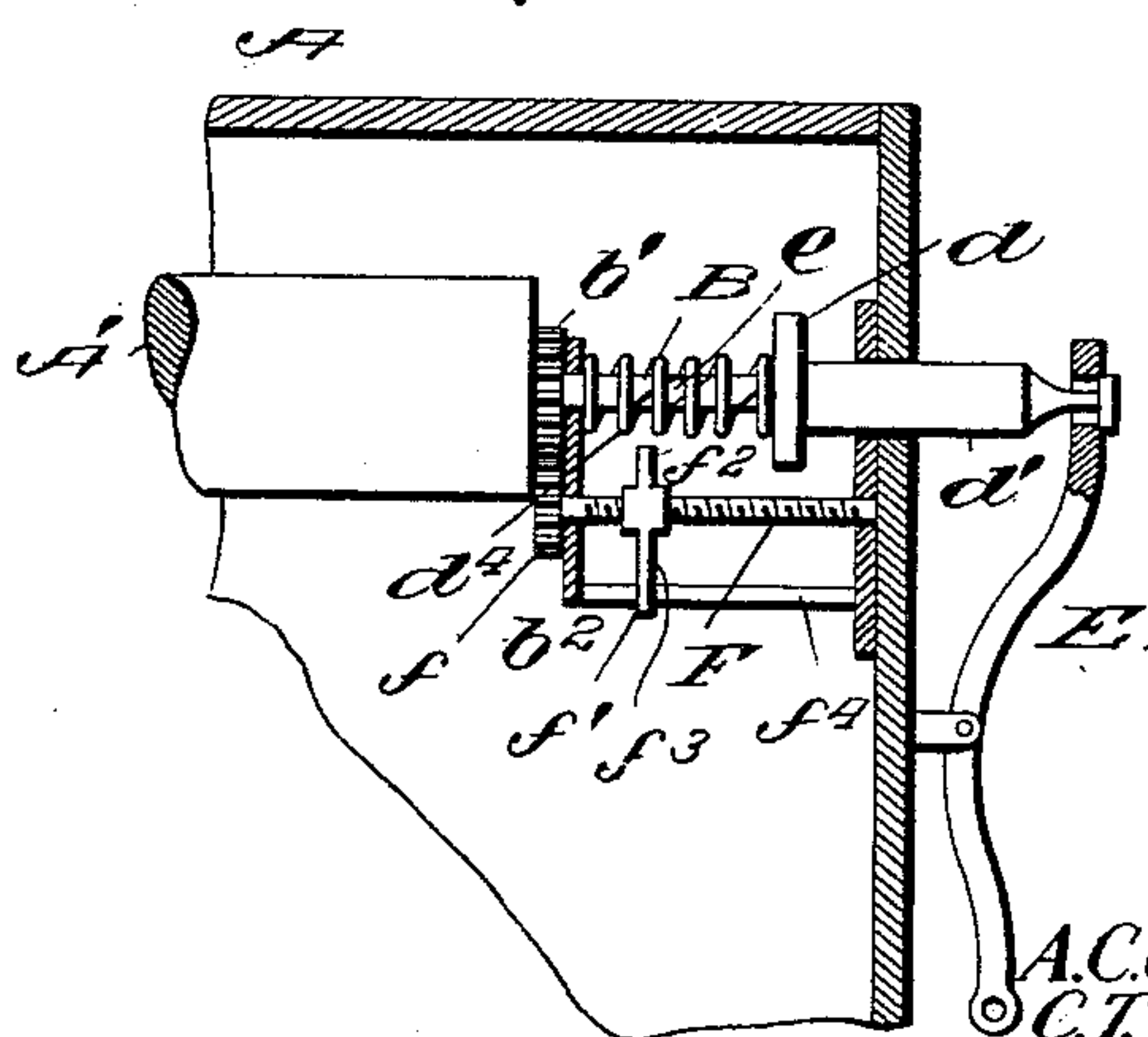


Fig. 4.



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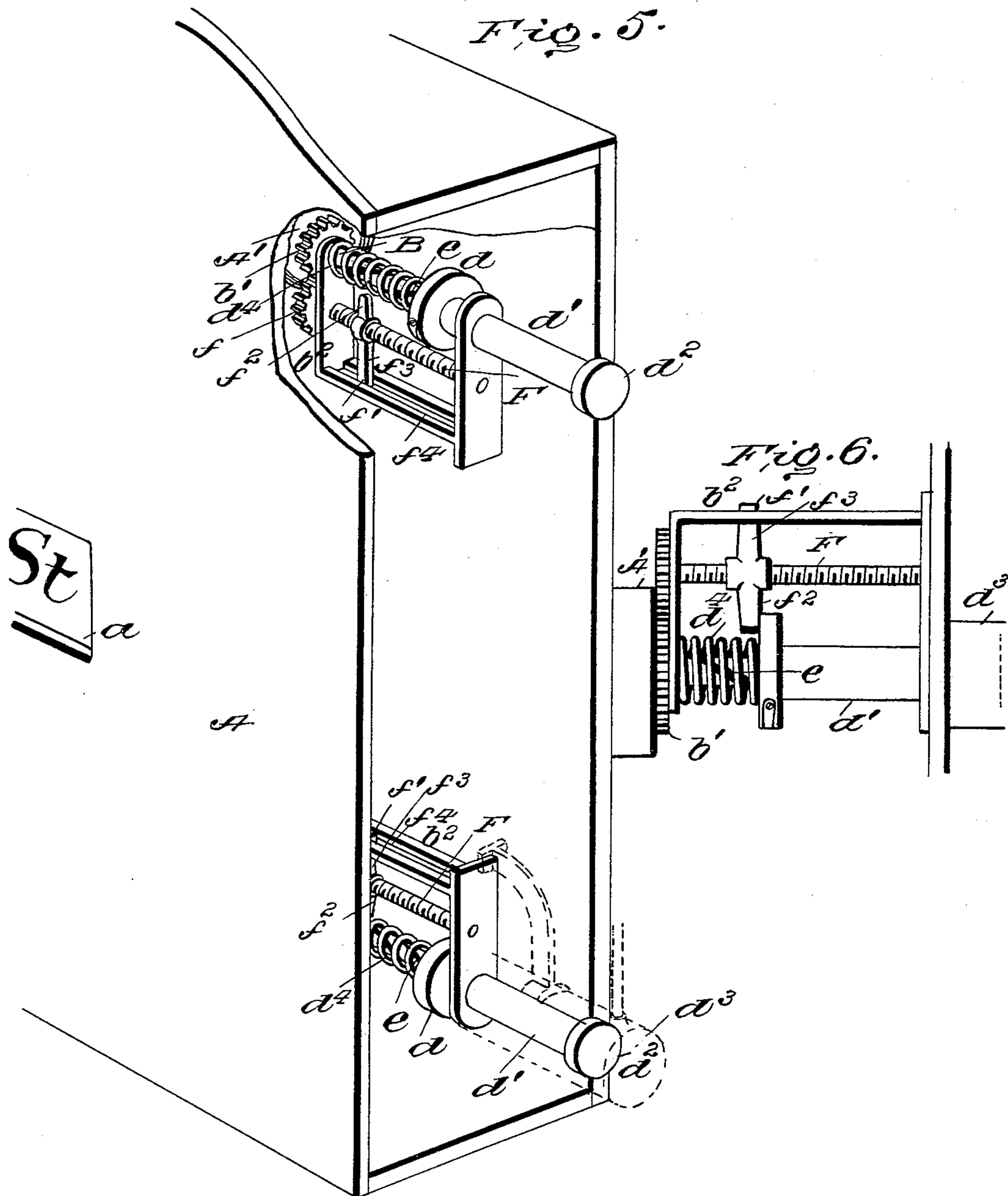
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2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE.

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STATION-INDICATOR.

SPECIFICATION forming part of Letters Patent No. 618,185, dated January 24, 1899.

Application filed February 26, 1898. Serial No. 671,732. (No model.)

To all whom it may concern:

Be it known that we, ALFRED C. OSENBACH and CHARLES T. OSENBACH, of Rittersville, and WILLIAM H. BREGENZER, of Coopersburg, Lehigh county, State of Pennsylvania, have invented certain new and useful Improvements in Station-Indicators; and we 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.

This invention contemplates certain new and useful improvements in station-indicators; and it has for its object the production of simple, highly-efficient, and inexpensive means whereby the names of the several stations or streets along a railway-route are successively presented to the view of the passengers or occupants of a railway-car.

The invention will be hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a longitudinal sectional view illustrating our invention. Fig. 2 is a transverse sectional view on line 2 2, Fig. 1. Fig. 3 is a detail. Fig. 4 is a view of a slight modification. Fig. 5 is an enlarged perspective view. Fig. 6 is an enlarged detail.

Referring to the drawings, A designates a casing having a front sight-opening *a*, back of which is designed to pass a belt *a'*, containing the names of the various stations or streets, guide-rolls *a*² being arranged to direct the movement of said belt. The ends of said belt are secured to upper and lower rolls A', rotatably mounted in casing A. At one end each of said rolls carries a ratchet-wheel *b*, while at its other end is a pinion *b'*. The shaft B is supported by the casing and a bracket *b*². A pawl *b*³ is normally held in engagement with ratchet-wheel *b* by a spring *b*⁴, said pawl being designed to prevent reverse movement of the roll. The pawl *b*³ may be held out of engagement with ratchet-wheel *b* by any suitable means. (Not shown.)

The shaft B is formed with a peripheral spiral groove *e*, in which fit projections of a clutch *d*, mounted on the inner end of a tubular shaft *d'*, which incloses shaft B. As the shaft *d'* is pushed inward the clutch *d* will ef-

fect the rotation of shaft B; but at the outward movement of said shaft *d'* the clutch, while free to rotate, will not operate shaft B. The shaft *d'* is reciprocated back and forth upon shaft B by a piston *d*², working in a cylinder *d*³, having an inlet for compressed air or steam, whereby said piston may be forced in one direction. By this arrangement when said piston is operated the clutch will be moved inward, effecting the rotation of shaft B and the consequent rotation of roll A'. The clutch and its shaft are returned to their normal positions under the action of a coil-spring *d*⁴, encircling shaft B.

Any preferred form of clutch may be employed. We have shown the same as comprising a ratchet-wheel *d*⁵, having a lug *d*⁶ projecting into its opening, so as to fit in the groove *e*, and a spring-pawl *d*⁷, carried by a ring-like casing *d*⁸ on the inner end of shaft *d'*. When the latter is moved inward, the engagement between the pawl *d*⁷ and the ratchet-wheel will be positive, while in the reverse movement said ratchet-wheel will be free to revolve independently of said pawl.

In Fig. 4 we have illustrated a lever E and operating-cord in lieu of the piston *d*². This is specially designed for street-car service.

In bracket *b*² is mounted a second threaded rod F, having on one end a pinion *f* meshing with pinion *b'*. Upon said rod is a stop *f'*, having upper and lower arms or extensions *f*² *f*³, the latter being extended through a guide-slot *f*⁴, formed in the bottom of said bracket.

The operation is as follows: Steam or air is admitted into cylinder *d*³, whereupon the piston *d*² is moved from its normal position, and the shaft *d'* being moved inward will cause clutch *d* to effect the rotation of shaft B until said clutch contacts with the arm of extension *f*² of stop *f'*. This rotation of the shaft B effects the rotation of rod F through the medium of pinions *b'* and *f*, whereby the stop *f'* is moved under the action of the thread of said rod. As soon as pressure is released the clutch and shaft *d'* and piston are returned to their normal positions. In this connection it will be particularly noted that as the diameter of roll A' increases because of the winding of the belt *a'* there-

upon the rotation thereof must be correspondingly decreased in order to secure a uniformity in the length of said belt taken up in each revolution and insure the positioning of a name on said belt at the sight-opening. This regulation is effected by the stop *f'*, which being moved outward at each operation automatically gradually shortens the stroke of the shaft *d'*.

The advantages of our improved station-indicator are at once apparent, and it will be particularly observed that the same is simple and inexpensive and not liable to become readily deranged. It will also be noted that while we have described the operating mechanism of but roll, yet it will be understood that each roll is a duplicate of the other, whereby the belt can be caused to travel in a reverse direction when the car is making a return trip.

We claim as our invention—

1. The herein-described station-indicator, comprising a casing, upper and lower rolls mounted therein, a belt connected at its ends to said rolls, and means for operating each of said rolls, comprising a shaft extended from one end of each roll and having a spiral groove therein, a reciprocating member engaging said groove and adapted to effect the rotation of said rod, and automatically-operated means for limiting the movement of said reciprocating member, substantially as set forth.

2. The herein-described station-indicator, comprising a casing, upper and lower rolls mounted therein, a belt connected at its ends to said rolls, and means for operating each of said rolls, comprising a shaft extended from one end of each roll, and having a spiral groove therein, a clutch engaging said grooved shaft, a carrier for said clutch, means for reciprocating said carrier, and gradually-movable means for limiting the movement of said carrier, substantially as set forth.

3. The herein-described station-indicator, comprising a casing, upper and lower rolls mounted therein, a belt connected at its ends to said rolls, and means for operating said rolls, comprising a shaft having a spiral groove therein, a tubular shaft adapted to receive said former shaft, a clutch carried

thereby and engaging said grooved shaft, means for reciprocating said tubular shaft, and a follower operated by the rotation of said shaft and adapted to engage said tubular shaft, substantially as set forth.

4. The herein-described station-indicator, comprising a casing, upper and lower rolls mounted therein, a belt connected at its ends to said rolls, a reciprocating member adapted to effect the rotation of each of said rolls, a threaded rod adapted to be rotated by the rotation of said roll, and a stop operated by said rod and having an arm adapted to be engaged by said reciprocating member, substantially as and for the purpose set forth.

5. The herein-described station-indicator, comprising a casing, upper and lower rolls mounted therein, a belt connected at its ends to said rolls, a reciprocating member adapted to effect the rotation of each of said rolls, means for operating said member, a threaded rod adapted to be operated by the rotation of said roll, a stop operated by said rod having an upper arm adapted to be engaged by said reciprocating member, said stop also having a lower arm and a guide with which said lower arm engages, substantially as and for the purpose set forth.

6. The herein-described station-indicator, comprising a casing, upper and lower rolls mounted therein, a belt connected at its ends to said rolls, and means for operating each of said rolls, comprising a shaft having a spiral groove therein, a clutch engaging said grooved shaft, a carrier for said clutch, a cylinder, a piston working therein, connections between said piston and said carrier, and means for limiting the movement of said carrier, substantially as set forth.

In testimony whereof we have signed this specification in the presence of two subscribing witnesses.

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