A. C. RODGERS.

Improvement in Station Indicators.

No. 116,223. Patented June 20, 1871.

FIG. 1.

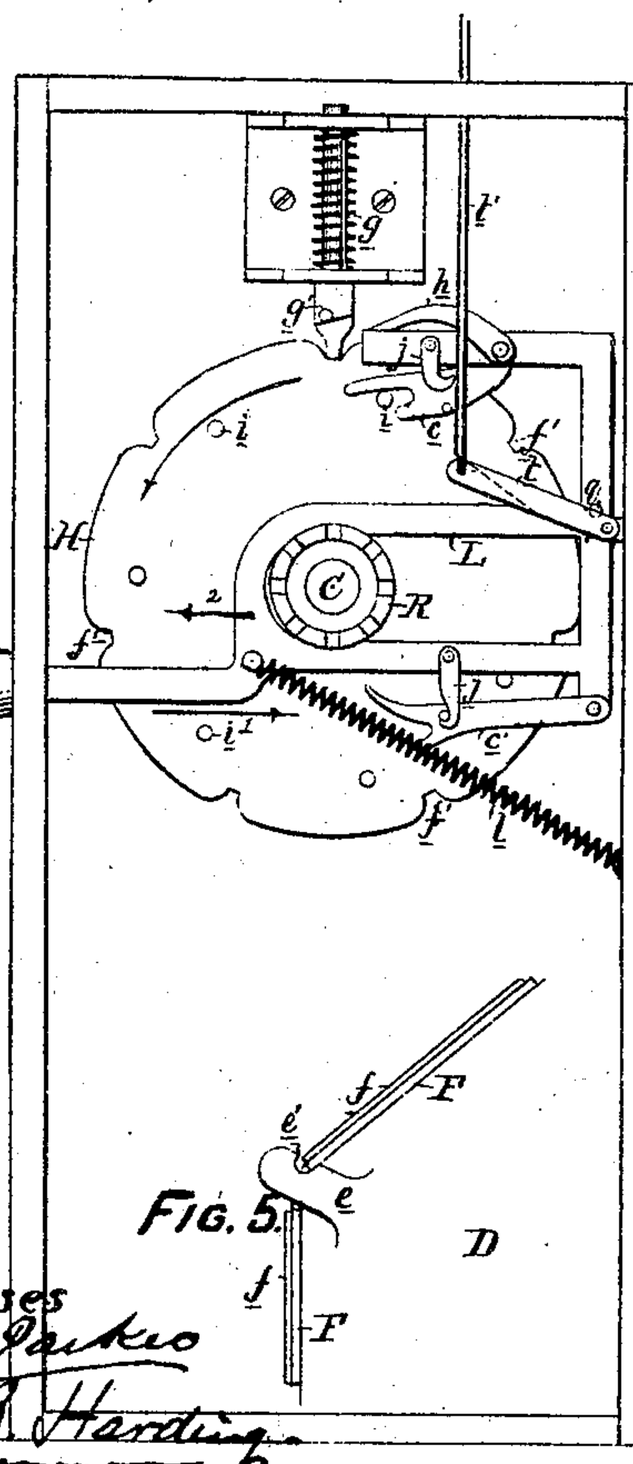


FIG. 2.

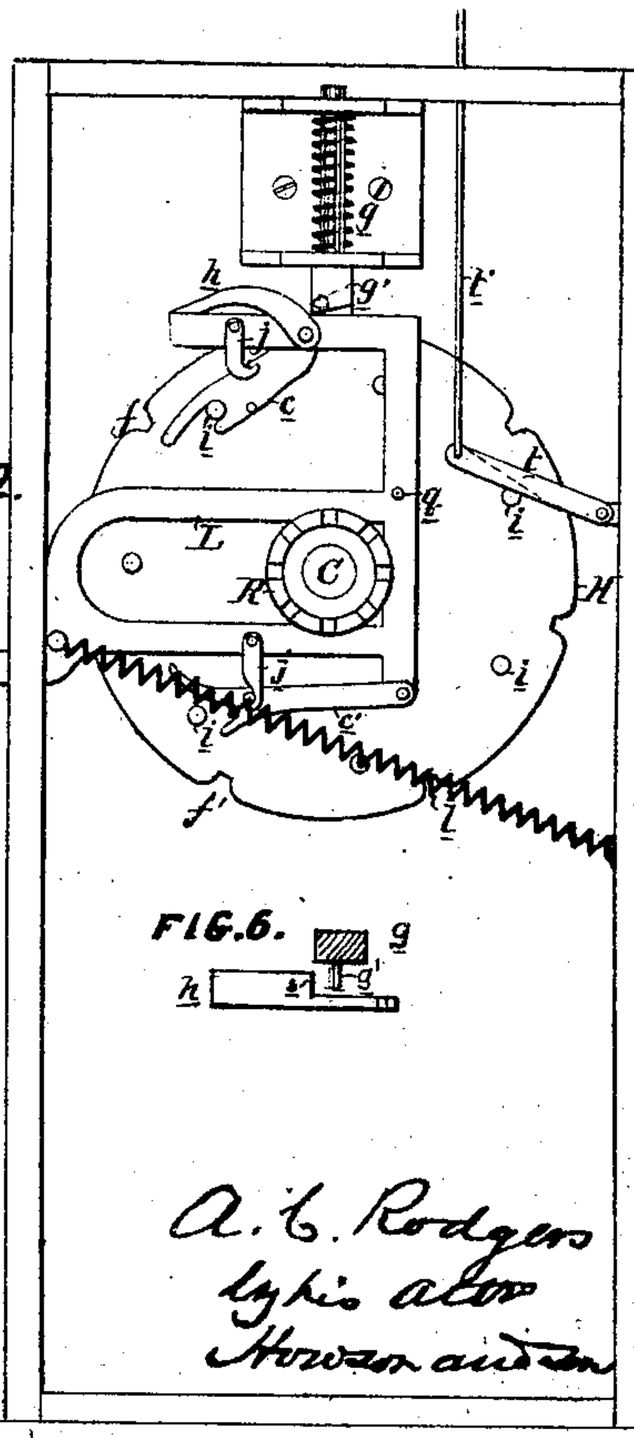


FIG. 6.

FIG. 5.

Witnesses
John Parker
Jno. B. Harding

A. C. Rodgers
by his atts
Howson and Sons

FIG. 4.

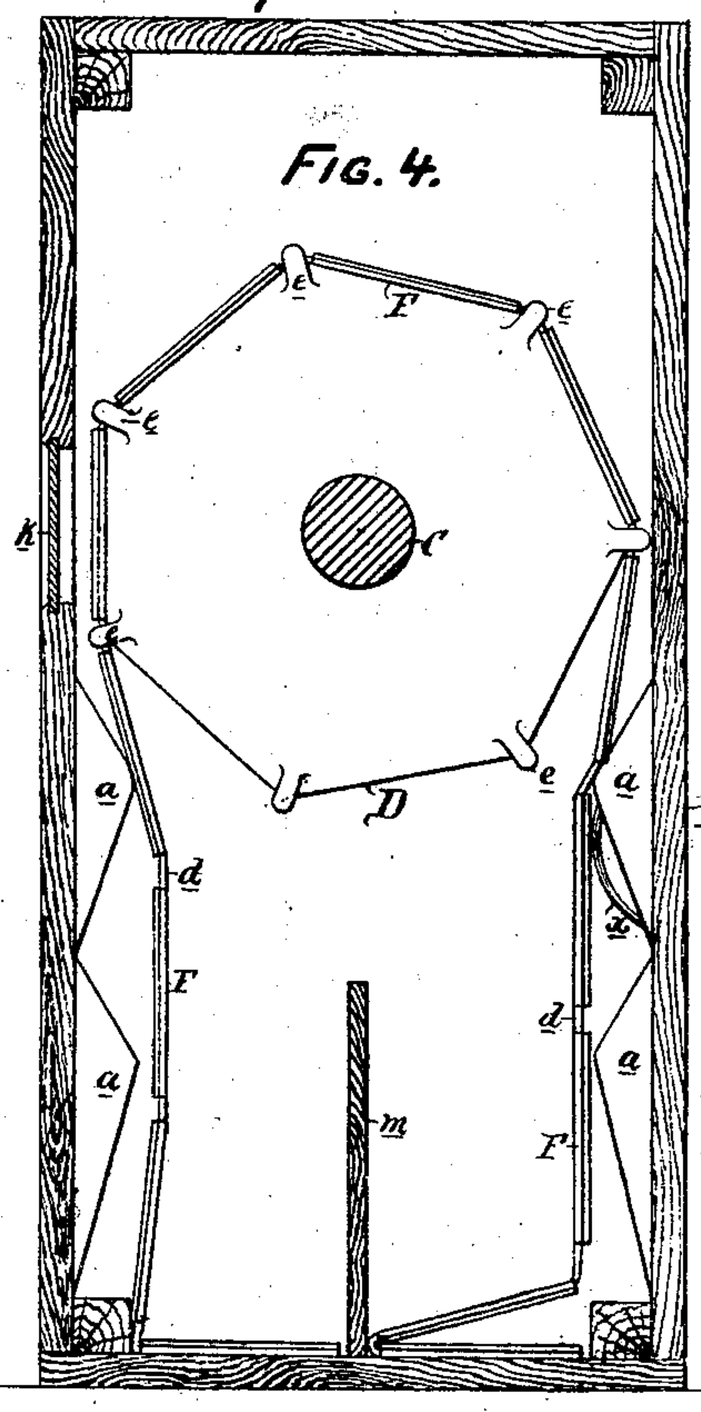
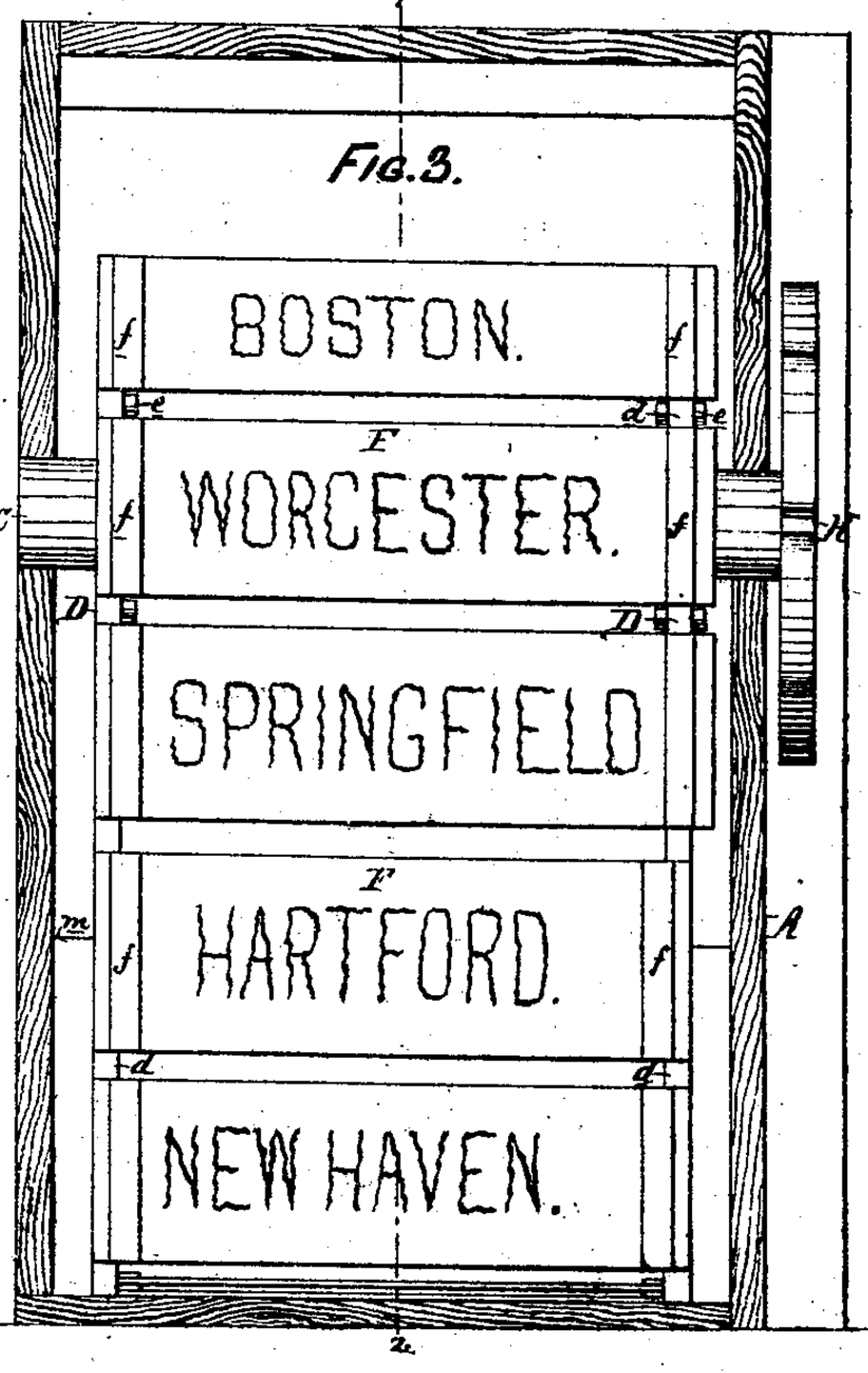


FIG. 3.



116,223

UNITED STATES PATENT OFFICE.

AMOS CHARLES RODGERS, OF SUFFIELD, CONNECTICUT, ASSIGNOR TO HIMSELF AND JAMES A. HAMILTON, OF SAME PLACE.

IMPROVEMENT IN STATION-INDICATORS.

Specification forming part of Letters Patent No. 116,223, dated June 20, 1871.

To all whom it may concern:

Be it known that I, AMOS CHARLES RODGERS, of Suffield, county of Hartford, State of Connecticut, have invented an Improved Station-Indicator, of which the following is a specification:

Nature and Object of the Invention.

My invention consists of certain improvements, too fully described hereafter to need preliminary explanation, in that class of station-indicators in which the names of the stations are printed on a chain or apron of cards passed over a drum or wheels, by the revolutions of which the names of the stations are brought successively opposite a slit or opening in the case within which the apparatus is contained.

Description of the Accompanying Drawing.

Figure 1 is a side view of my improved station-indicator with part of the case detached; Fig. 2, the same with the working parts in a different position; Fig. 3, a transverse vertical section; Fig. 4, a section on the line 1 2, Fig. 3; Fig. 5, a detached view; and Fig. 6, a detached plan view of part of the apparatus.

General Description.

The working portions of the apparatus are contained within and supported by a suitable box or case, A. A spindle, C, turns in suitable bearings in the upper portion of the opposite sides of the case A, and to this spindle are secured two disks, D D, to the edges of which are adapted tapes or straps *d d*, the latter being connected together by plates F of stout card-board or other suitable material, which are faced, near their opposite ends, with metal plates *f* to protect the same from the effects of wear. Teeth *e*, formed on each of the disks D, project into the intervening spaces between the several plates F, and notches *e'* are made on one or both edges of the said teeth for the purpose of retaining the cards in their places during the jolting of the cars, &c. (See Fig. 5.) Inclined projections *a a*, on the interior of the opposite sides of the case A, are arranged to operate in connection with springs *x*, in a manner described hereafter. To one end of the spindle C is secured a wheel, H, in the periphery of which are formed notches *f'*, corresponding in number to the teeth of the disks D, and to these notches is adapted the lower end of a spring-bolt, *g*. To the frame L is hung an arm, *h*, the inclined face of which, when the frame moves forward, passes beneath a pin, *g'*, on the spring-bolt *g*, and elevates the latter until an abrupt shoulder, *s*, on the arm passes beneath the pin, when the bolt descends. On the return movement of the frame the arm *h* passes over and is elevated by the pin *g'* until it escapes from contact with the latter, when it falls to its first position. By this means the bolt is operated only on the forward movement of the frame. Pawls *c* and *c'* are adapted to projecting pins *i* on the face of the wheel H, and are arranged, by means of hooks *j*, to be retained free from contact with the said pins, under the circumstances described hereafter. The curved arm *h* and the pawls *c* and *c'*, with their hooks *j*, are hung to a horizontal sliding frame, L, supported and guided by the frame A and spindle C, operated by a handle, *p*, projecting through the front of the case, and acted upon by a spring, *e*, which tends to draw the said sliding frame in the direction of the arrow 1, Fig. 1. An inclined arm, *t*, hung to the side of the case A, and connected to an alarm-bell by means of a wire, *t'*, is actuated by means of a projection, *q*, on the sliding frame L, in the manner described hereafter. On turning the spindle C with its disks D the tapes and plates will be carried around, and, by making this motion intermittent, the names of the stations on the plates may be brought successively opposite a glazed opening, *k*, in the case A, and thus exposed to view. A portion of the tapes or apron carrying the plates or cards is folded on the bottom of the case. The other portion passes over the disks D and descends as the latter revolves, and during its descent is directed toward the center of the case by the inclined projections *a* and springs *x*, so that as the lower edges of the plates successively strike the bottom they will fall to a horizontal position and be folded regularly one above the other. A partition, *m*, in the center of the case, extending upward from the bottom of the same, separates the opposite ends of the apron and prevents any disarrangement of the same. In order to impart an intermittent rotary motion to the spindle C in either direction the

frame L is drawn outward, by means of the handle *p*, in the direction of the arrow 2, Fig. 1, when the wheel H will be unlocked by the arm *h* raising the spring-bolt *g*, and will be turned by one of the pawls *c* or *c'* striking one of the pins *i*, the parts being restored to their original positions, on releasing the handle *p*, by the action of the spring *l*. While the pawl *c* is engaged in operating the wheel H in the direction of the arrow, Fig. 1, the pawl *c'*, which is arranged to turn the wheel in the opposite direction, is retained free from contact with the pins *i* by means of its hook *j*, and the pawl *c* is raised and held clear of the pins *i* by its hook *j* in a similar manner when the pawl *c'* is in operation.

In order to attract the attention of passengers, when the apparatus is operated and the name of a station exposed to view through the opening in the case, the alarm-bell to which the arm *t* is connected is sounded whenever the sliding frame is drawn outward and the said arm depressed and then suddenly released by the projection *q* on the same.

The spindle C can be turned by a key adapted to projections on the disk R on the end of said spindle, when it is necessary to set or adjust the apparatus, if the bolt *g* be first withdrawn from the notches in the wheel H, and the pawls *c* and *c'* disengaged from the pins on the said wheel.

For the purpose of preventing tampering with the apparatus by unauthorized persons a lock may be arranged at any convenient point adjacent to the sliding frame, the key for the said lock being in the hands of the person whose duty it is to attend to the apparatus.

The apparatus, although in the present instance arranged to be operated by hand, can be made automatic by providing it with arms or levers to be struck and turned by projections or cams on the railway track, as described in my reissued patent of February 15, 1870.

Claim.

The combination of the wheel H, its pins and notches, the frame or bar L sliding as described, the spring-bolt *g* and its pins *g'*, and the pawls *c c'*, retaining-hooks *j*, and arm *h*, the whole being arranged and operating together as and for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

AMOS CHARLES RODGERS.

Witnesses:

DAVE CLINE,

EZRA B. BARNUM.