

M. L. MANN.
STATION INDICATOR.

No. 388,058.

Patented Aug. 21, 1888.

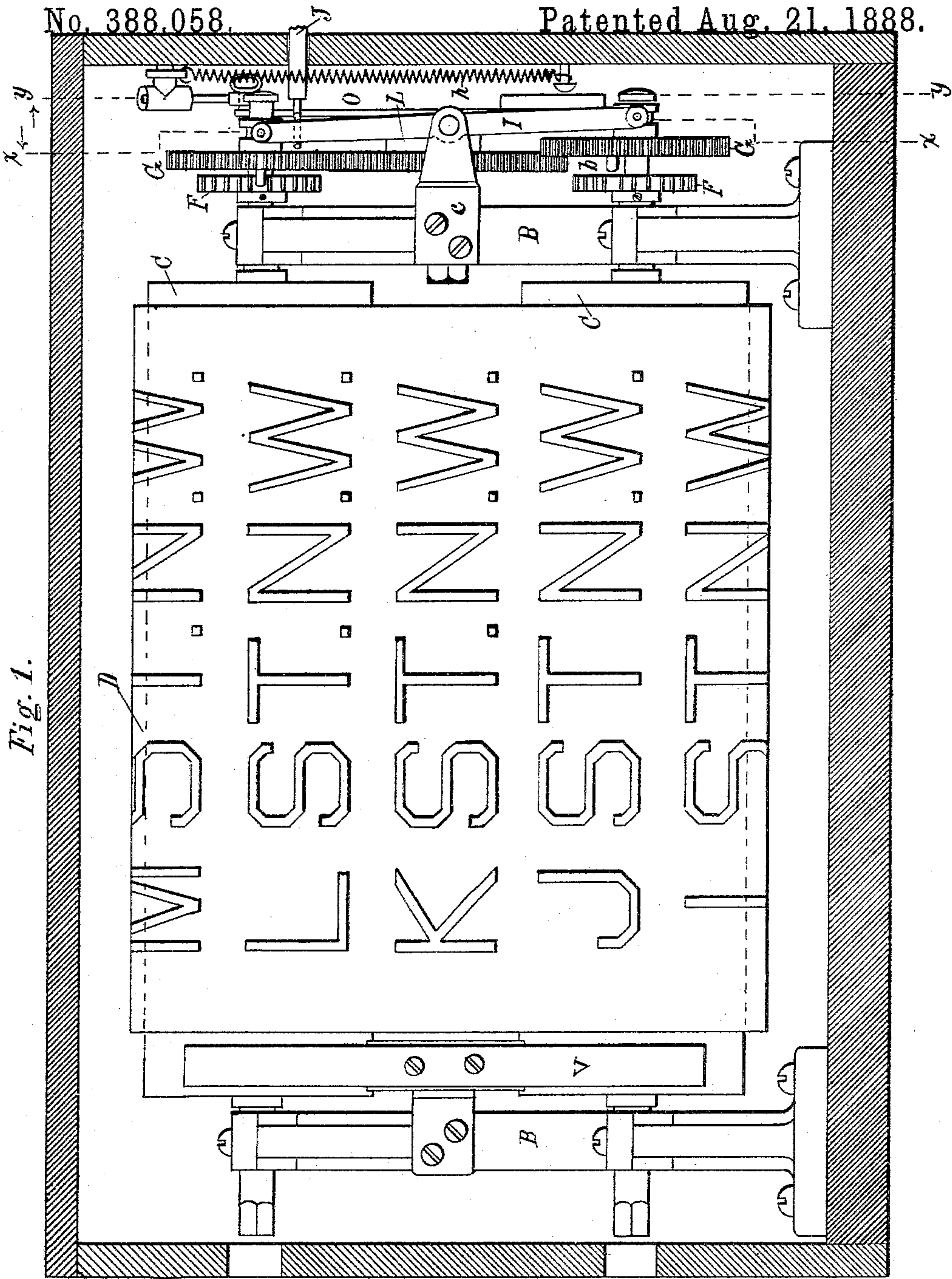


Fig. 1.

WITNESSES:

T. B. Mason.
S. J. Nash.

INVENTOR,

Margus L. Mann.

BY

Francis C. Bower.

ATTORNEY.

(No Model.)

2 Sheets—Sheet 2

M. L. MANN.
STATION INDICATOR.

No. 388,058.

Patented Aug. 21, 1888.

Fig. 3.

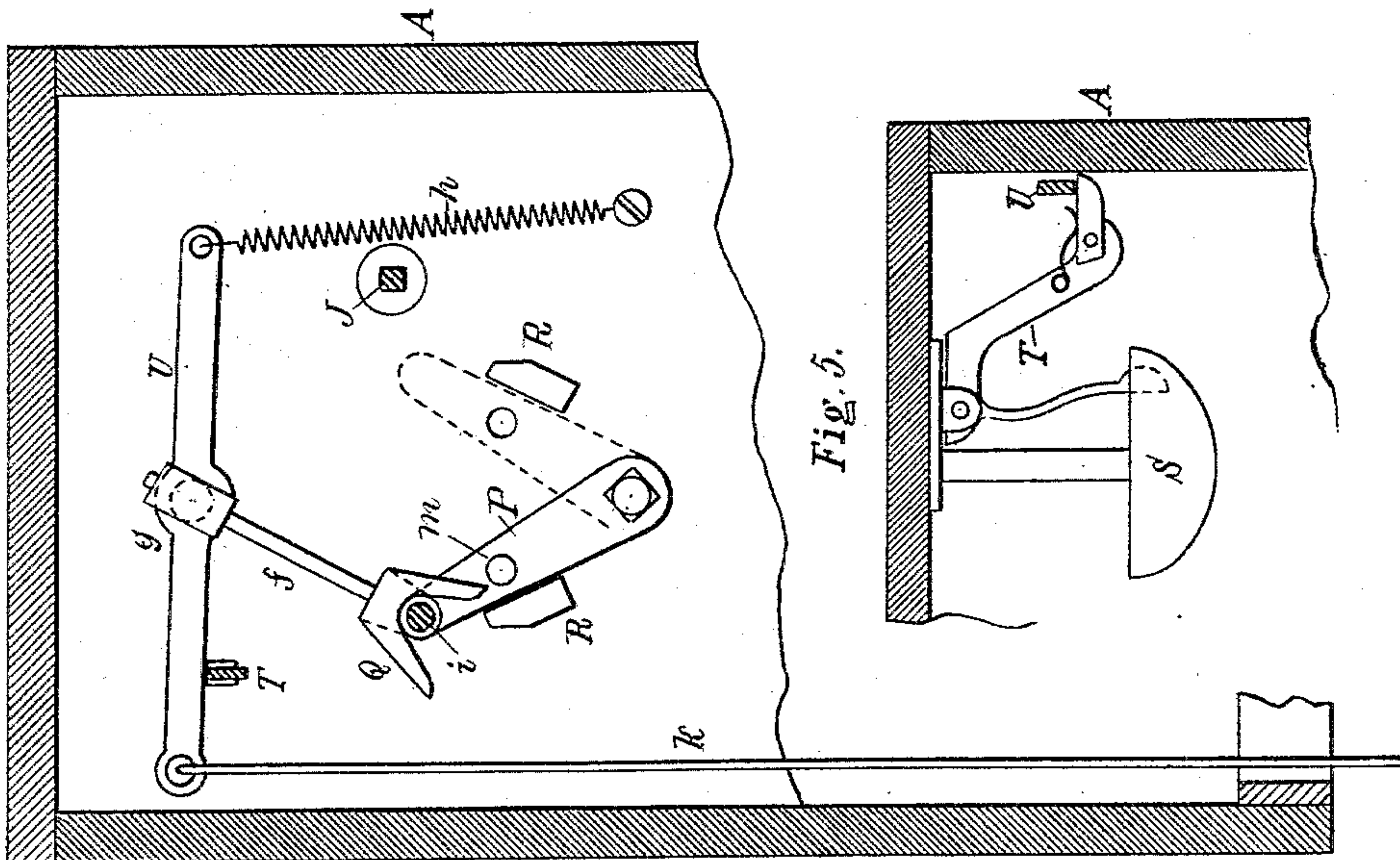


Fig. 5.

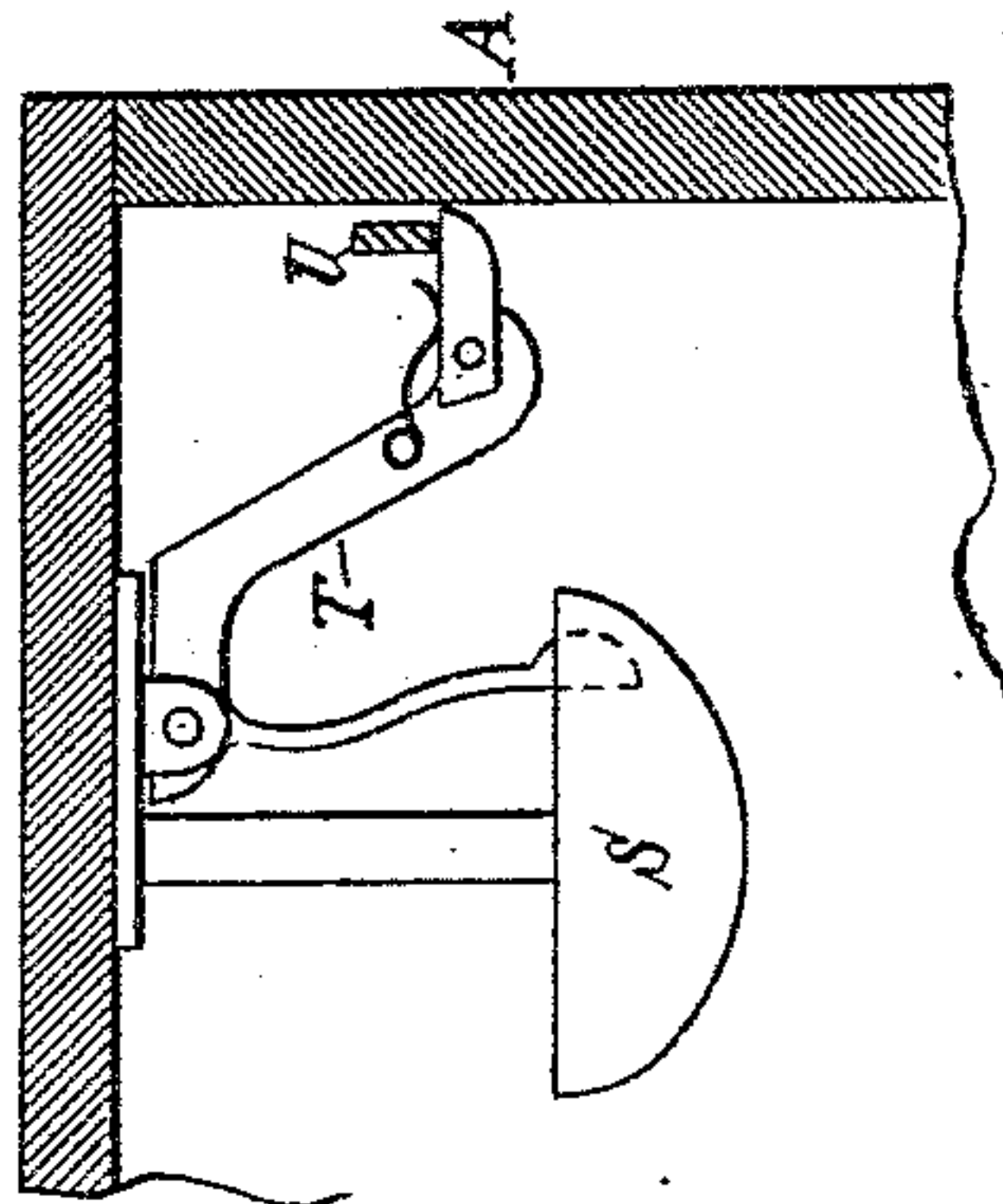
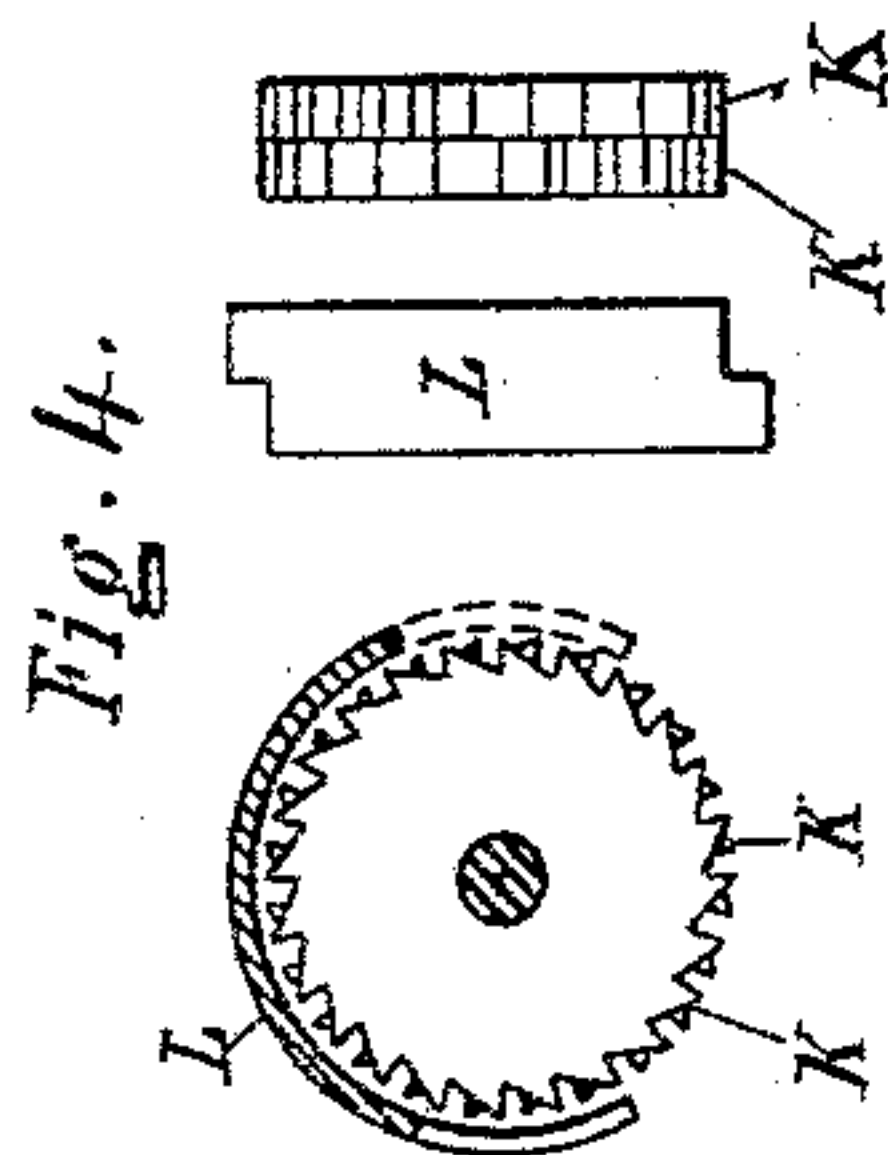
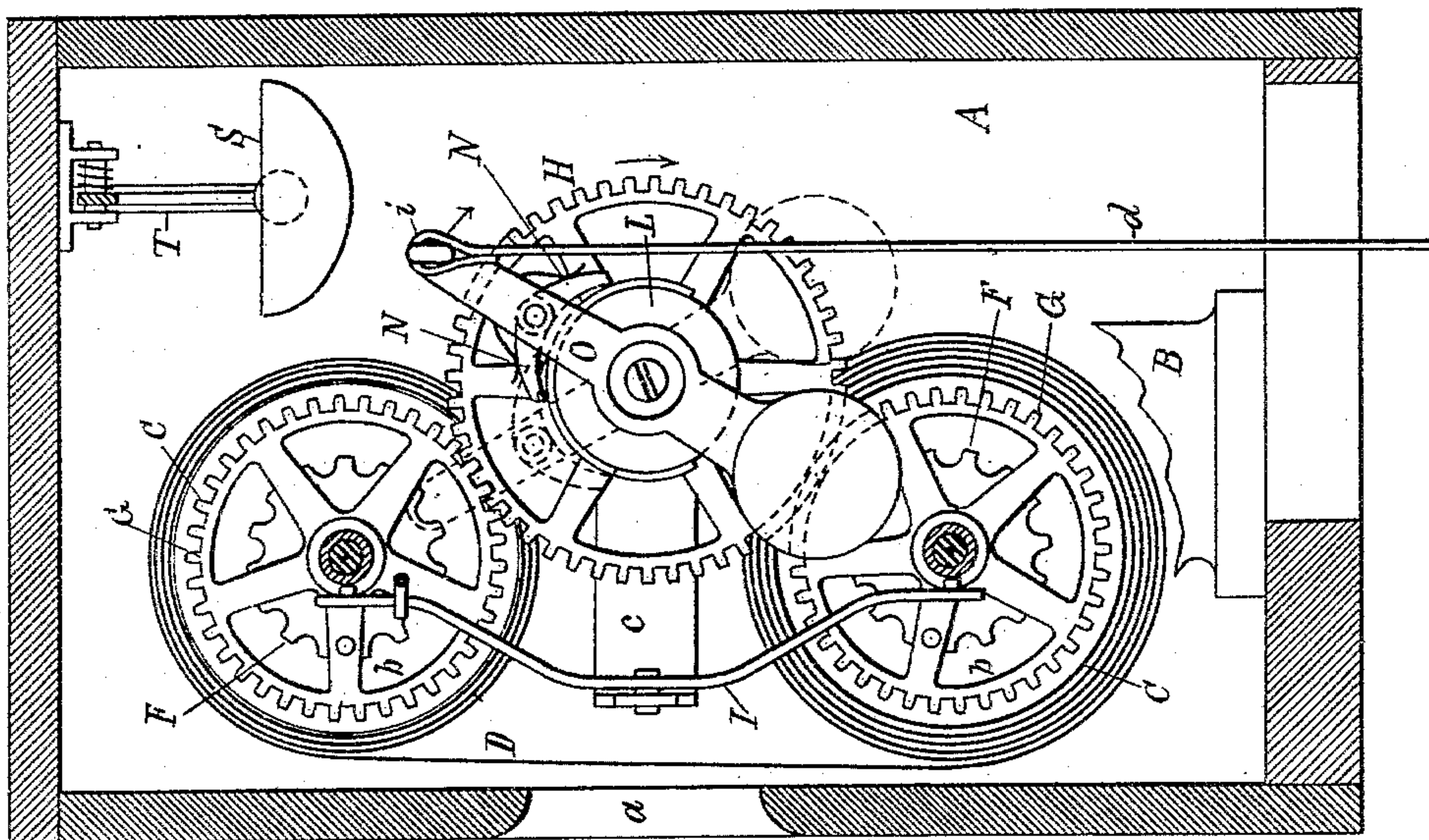


Fig. 2.



WITNESSES:

Sal. S. Crobank
Geo. H. White.

INVENTOR

Marquis L. Mann
BY *Francis C. Bowen*
ATTORNEY

UNITED STATES PATENT OFFICE.

MARQUIS L. MANN, OF BROOKLYN, NEW YORK.

STATION-INDICATOR.

SPECIFICATION forming part of Letters Patent No. 388,058, dated August 21, 1888.

Application filed January 3, 1888. Serial No. 259,684. (No model.)

To all whom it may concern:

Be it known that I, MARQUIS L. MANN, a citizen of the United States, and a resident of Brooklyn, in the county of King and State of New York, have invented certain new and useful Improvements in Station-Indicators, of which the following is a specification.

My invention relates to station or street indicators for railroad-cars or other vehicles, and especially that class thereof in which an apron containing the names of the stations is alternately wound on and off either of two rollers for successively bringing said names into view.

The novel features of my invention are hereinafter fully described, and illustrated in the accompanying drawings, in which—

Figure 1 represents a vertical longitudinal section looking at the face of the apron. Fig. 2 represents a vertical cross-section on the line *x x*, Fig. 1. Fig. 3 represents a like section on the line *y y*, Fig. 1. Figs. 4 and 5 represent detail views of parts.

Similar letters indicate similar parts.

The letter A indicates a box or case of wood or other suitable material, in which are secured standards B, forming bearings for the shafts of two rollers, C, carrying the apron D. The face of this apron is marked with the names of the stations, streets, or other places to be indicated, and the case A is provided with a sight-opening, *a*, Fig. 2, through which said names are exposed in succession as the apron is wound on and off either of the rollers.

For the purpose of producing the required motions of the apron-rollers C, each of the roller-shafts is provided with a fixed spur-wheel, F, and a loose cog-wheel, G, which latter is provided on one side with a spur, *b*, for the spur-wheel, and thus transmitting thereto the power from a driving-wheel, H, the latter being also a cog-wheel and gearing with both said loose or transmitting wheels. In practice one of the transmitting-wheels, G, is set to engage the proper spur-wheel, F, and the other to clear or disengage the corresponding wheel, as shown in Fig. 1, these positions thereof being reversed when it is desired to change the direction of the apron-rollers and apron. To shift the transmitting-wheels G, I employ a lever, I, and a side rod, J, having a forked end to engage said lever, the latter having its fulcrum in a bracket, *c*, secured to one of the

standards B, and its ends being constructed to engage the hubs of the transmitting-wheels. The slide-rod J extends outward through one end of the case A, and may be provided with a latch to hold it in position.

The driving-wheel H is fixed on its shaft, and on said shaft are also fixed two ratchet-wheels, K, (see Fig. 4,) the teeth of which project in opposite directions, and which are inclosed in a circular case, L, having suitable openings to admit to said wheels spring-pawls N, which serve to impart motion thereto, said pawls N being pivoted to a swinging arm or lever, O, at points opposite to the ratchet-wheels K, respectively, so that either of the pawls may engage one of said wheels. The pawl-arm O is hung on said shaft of the driving-wheel H, and an operating-cord, *d*, is connected to one end thereof, while its other end is provided with a weight, *e*.

When the pawl-arm O is in the position shown in Fig. 2, a pulling of the cord *d* has the effect of swinging said arm in the direction indicated by the arrow, and by this means one of the pawls N is made to engage the proper ratchet-wheel and turn the same, together with the driving-wheel H, in one direction, while when the pawl-arm is in the position shown by dotted lines in said figure the other pawl is made to engage its ratchet-wheel, and the motion of the parts is reversed, so that, according to the position of said arm, the motion of the apron-rollers is in one or the other direction. When either of the pawls N is in operation, the other pawl simply rides upon the back of the case L without affecting the parts.

For the purpose of changing the position of the pawl-arm O, I employ a reversing-lever, P, (see Fig. 3,) to which is secured a fork, Q, engaging a stud, *i*, of said arm in such a manner that by swinging said lever to the position shown, respectively, by full lines and dotted lines in Fig. 3 the desired adjustment of the pawl-arm may be effected. Stops R are secured to one end of the case A, to regulate the position of the reversing-lever, and the latter is perforated to receive a bolt, *m*, for holding it in either position. The fork Q has a shank, *f*, which is fitted in an oscillating guide, *g*, to slide therein when the reversing-lever is being set.

In order to announce the shifting of the

apron D, I employ an alarm-bell, S, the hammer-lever T of which is arranged in the path of a lever, U, to one end of which is connected a spring, *h*, and to the other end an operating-cord, *k*, which in practice is united to the other cord, *d*, in such a manner that the bell is sounded as often as the shifting mechanism is actuated.

In order to permit the apron-rollers to be turned independently of the shifting mechanism, one end of both roller-shafts may be squared, as shown in Fig. 1, to receive a suitable key or wrench.

A brake, V, may also be used to retard the motion of the apron-rollers.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a station-indicator, the combination, with an apron and apron-rollers, of the fixed spur-wheels F and loose cog-wheels G, both mounted on the shafts of said rollers, each of said loose wheels having a spur to engage the proper spur-wheel, the shifting-lever I, engaging the loose cog-wheels, the slide-rod J, engaging the shifting-lever, the driving-shaft H, gearing with both loose wheels, and a means for imparting an intermittent motion to the

driving-wheel, the whole adapted to operate substantially as herein described.

2. In a station-indicator, the combination, with an apron and apron-rollers, of the driving-wheel H, arranged to impart motion to said rollers, the two ratchet-wheels K, having reversed teeth, the pawl-arm O, carrying pawls for engaging said ratchet-wheels, respectively, the case L, inclosing the ratchet-wheels and having openings to receive said pawls, and a means for imparting a vibrating motion to said arm, the whole adapted to operate substantially as herein described.

3. In a station-indicator, the combination, with an apron and apron-rollers, of the driving-wheel H, the ratchet-wheels K, having reversed teeth, the pawl-arm O, and pawls for engaging the ratchet-wheels, respectively, the whole inclosing case L, the reversing-lever P, having a fork, Q, to engage the pawl-arm, and the stops R, for regulating the position of the reversing-lever, the whole adapted to operate substantially as herein described.

MARQUIS L. MANN.

Witnesses:

FRANCIS C. BOWEN,
EDWIN B. MANN.