

(No Model.)

F. G. WEEKS.
RAILROAD TIME AND STATION INDICATOR.

No. 563,340.

Patented July 7, 1896.

FIG. 1.

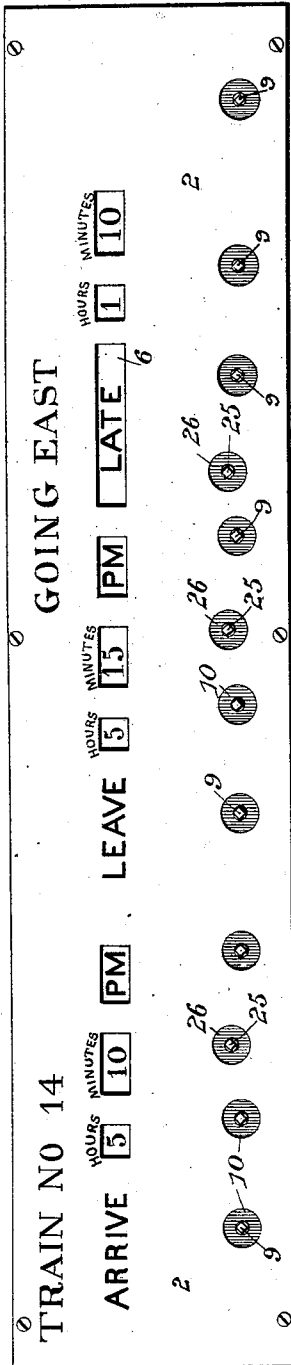


FIG. 2.

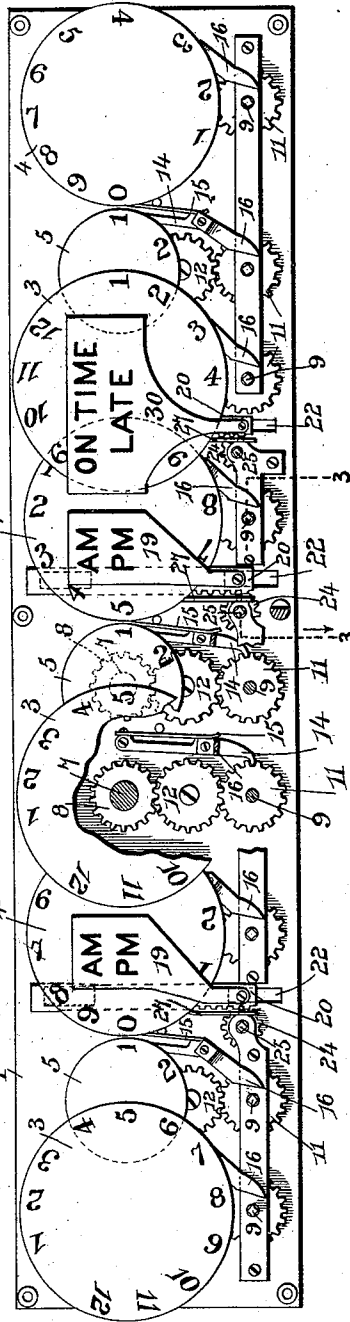


FIG. 3.

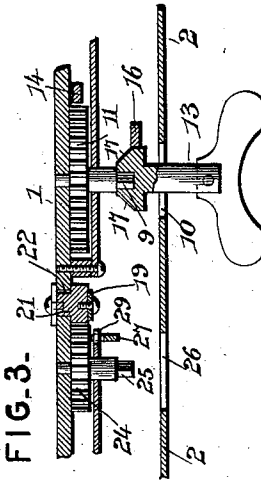


FIG. 4.

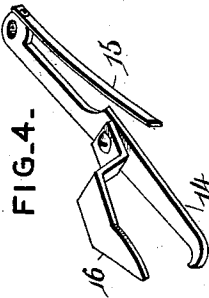
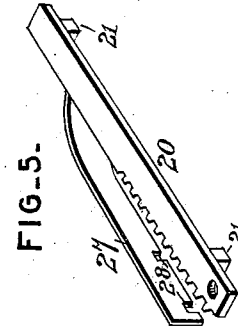


FIG. 5.



Inventor

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UNITED STATES PATENT OFFICE.

FREDERICK GEORGE WEEKS, OF LYONS, IOWA.

RAILROAD TIME AND STATION INDICATOR.

SPECIFICATION forming part of Letters Patent No. 563,340, dated July 7, 1896.

Application filed August 13, 1895. Serial No. 559,168. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK GEORGE WEEKS, a citizen of the United States, residing at Lyons, in the county of Clinton and State of Iowa, have invented a new and useful Railroad Time and Station Indicator, of which the following is a specification.

My invention relates to indicators, and particularly to those designed to give the times of arrival and departure of trains at the various depots and stations on a road, and also designed to indicate whether a train will arrive on time or not, and if not, the extent of lateness; and the objects in view are to provide a simple and efficient construction and arrangement of parts whereby the numerals indicating hours and minutes and the various other parts of the apparatus may be adjusted to suit changes of schedule and reports as they are received from the incoming trains.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claim.

In the drawings, Figure 1 is a front view of a device constructed in accordance with my invention. Fig. 2 is a similar view with the face-plate removed and partly broken away to illustrate the gearing. Fig. 3 is a detail section on the line 3 3 of Fig. 2 through one of the key-posts, showing the key engaged therewith to disengage the catch or locking device from the gearing. Fig. 4 is a detail view of one of the pawls detached. Fig. 5 is a similar view of one of the slides and the pawl carried thereby.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a base-plate, parallel with which is mounted a series of rotary dials bearing numerals to indicate hours and minutes, the desired numerals upon said dials being exposed through the observation-openings in the face-plate 2, said face-plate being inscribed to indicate the number or name of a train, the direction of movement, as well as the words "Arrive" and "Leave," "Hours," "Minutes," &c.

One set of indicating-dials includes an hour-dial 3 and minute-dials 4 and 5, the

hour-dial being provided with twelve numerals, the minute-dial 4 with ten, and the minute-dial 5 with five numerals, and in the construction illustrated in the drawings I employ three of these sets of indicating devices, one for exposure through the openings following the word "Arrive," a second for exposure through the openings following the word "Leave," and the third for exposure through corresponding openings following a slot 6 formed in the face-plate.

Each dial is provided with a hub 7, carrying a pinion 8, and motion is communicated to said pinion from a key-post 9, also mounted upon the base-plate and exposed through one of a series of openings 10, also formed in the face-plate. Said post carries a pinion 11, and in the construction illustrated an intermediate pinion 12 is interposed between the pinions 11 and 8, whereby the dial moves in the same direction as the key 13, which is fitted upon the post to accomplish the adjustment of the dials. The pinions 11 and 8 are also preferably made of the same diameter and having the same number of teeth, whereby the dial receives motion equal in angular velocity and extent with the key-post.

In order to prevent accidental change of the positions of the dials, I employ, for each train of gears connecting a key-post with a dial, a locking device consisting, in the construction illustrated, of a pawl 14, pivoted upon the base-plate and provided with an actuating-spring 15 to hold it normally in engagement with one of the pinions, and a trip-arm 16, attached to the pawl and extending close to the key-post in position to be engaged by a beveled shoulder 17 on the key 13 when the socket of said key is fitted upon the post. The beveled shoulder of the key engages a corresponding beveled surface upon the trip-arm, whereby when the key is forced rearwardly to place upon the key-post the trip-arm is deflected or moved from the key-post and the pawl is thereby disengaged from the pinion to allow of the adjustment of the dial while the key is in place thereon. When the key is removed from the key-post, the parts resume their normal positions and the dial is locked against movement.

In connection with each of the sets of time-indicating devices I employ a plate carrying

signs to indicate ante and post meridian, said plate 19 being carried by a slide 20, having guide-screws 21 mounted in slots 22 in the base-plate, said slide having a rack 23 meshing with a pinion 24 on a key-post 25. An opening is provided in the face-plate, as at 26, to expose the key-post, and the slide is locked in the position necessary to expose either of the signs by means of a spring-pawl 27, having notches 28 to engage a fixed stud 29.

By means of the two main sets of indicating-dials, of which the numerals are exposed through the openings following the words "Arrive" and "Leave," the times of arrival and departure of a train are shown, and in order to indicate whether a train is on time or late I employ a slide 30, constructed substantially as described in connection with the plates indicating before and after noon and operated by means constructed in the same way, said plate carrying the words "On time" and "Late," or their equivalents. Either of these signs on the plate 30 may be exposed through the slot 6, and by means of the additional set of time-indicating dials, of which the numerals are exposed through the hour and minute openings following said slot 6, the amount of lateness of a train will be shown.

In the drawings I have shown the members of the apparatus adjusted to indicate that train No. 14 will arrive at 5.10 p. m., will leave at 5.15 p. m., and is late one hour and ten minutes, and from the above description it will be obvious that any desired arrangement of the parts may be made to give the necessary information with regard to the arrival and departure of trains, the adjustment being simple, and, furthermore, that by ar-

ranging a plurality of devices constructed, as above described, in a column or series and marked to represent different trains the various trains arriving and leaving during the day at a given depot or station may be announced with accuracy and facility.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having described my invention, what I claim is—

In an indicating device, the combination with a face-plate having openings and inscribed to indicate arrival and departure, of time-indicating rotary dials having numerals for exposure through said openings in the face-plate, key-posts, connections between the key-posts and the dials, a reciprocable plate arranged contiguous to each set of time-indicating dials and bearing signs indicating ante and post meridian for exposure through an opening in the face-plate, slides carrying said plates, key-posts having pinions meshing with racks on the slides, and spring-pawls carried by the slides and provided with notches to engage fixed studs to lock the slides at the desired adjustment, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

FREDERICK GEORGE WEEKS.

Witnesses:

W. B. FARVER,
THOS. V. MURPHY.