

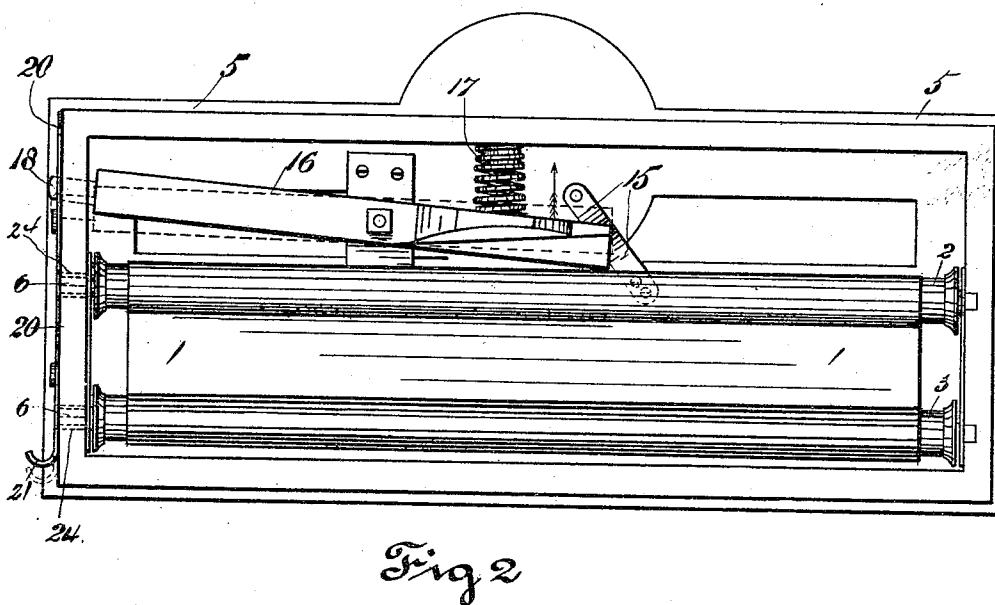
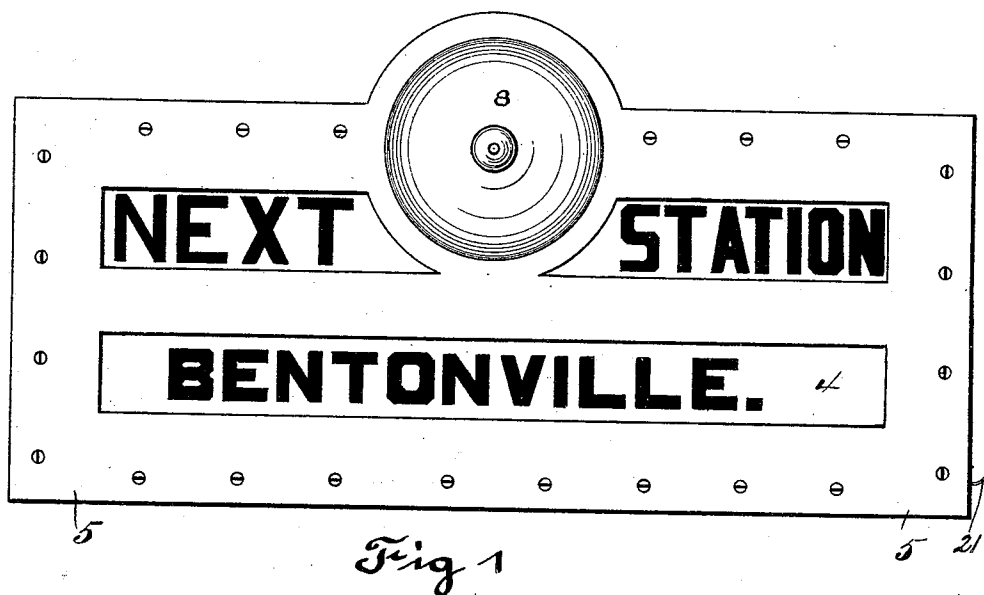
(No Model.)

2 Sheets—Sheet 1.

W. J. HULL.
STATION INDICATOR.

No. 542,193.

Patented July 2, 1895.



Witnesses

E. F. Rappenhans.

E. E. Paddock

Inventor

William J. Hull

By his Attorney

Thompson & Rice

(No Model.)

2 Sheets—Sheet 2.

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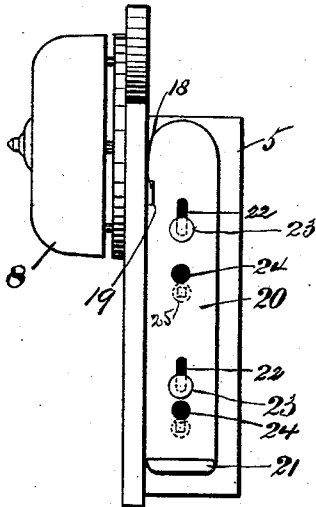


Fig 3

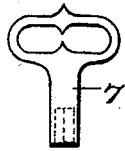


Fig 8

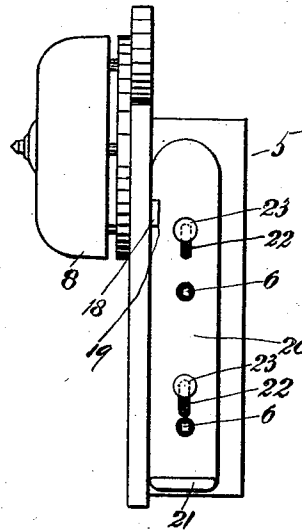


Fig 4

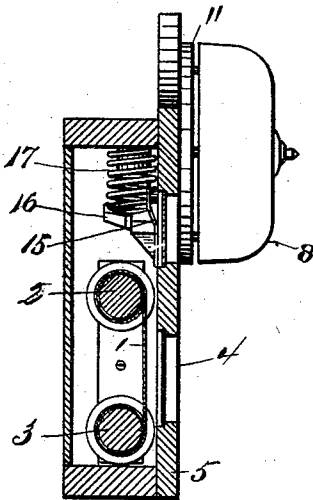


Fig 5

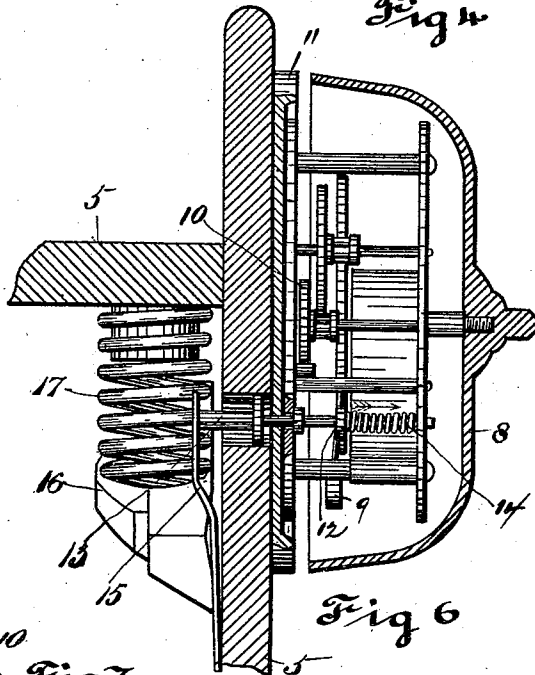


Fig 6

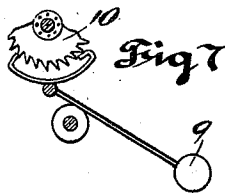


Fig 7

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UNITED STATES PATENT OFFICE.

WILLIAM J. HULL, OF CAMBRIDGE CITY, INDIANA.

STATION-INDICATOR.

SPECIFICATION forming part of Letters Patent No. 542,193, dated July 2, 1895.

Application filed March 23, 1895. Serial No. 542,918. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. HULL, a citizen of the United States, residing at Cambridge City, in the county of Wayne and State of Indiana, have invented new and useful Improvements in Station-Indicators, of which the following is a specification.

My invention relates to new and useful improvements in station-indicators; and it consists in an indication-ribbon mounted on carrying-rollers inclosed in a suitable casing and a gong-disengaging mechanism, whereby the mechanism of the gong is released to make an alarm, and will be hereinafter more fully set forth.

The object of my invention is to provide a station-indicator the ribbon-carrying rollers or drums of which cannot be turned or tampered with without causing an alarm to be made and means whereby the sounding of the alarm is continuous while the said carrying-drums are being moved and during the time which the winding-key is applied to said drums. I attain these objects by means of the mechanism in the indicator illustrated in the accompanying drawings, in which similar numerals of reference designate like parts throughout the several views.

Figure 1 is a front view of the face of the indicator. Fig. 2 is a rear view of the same with the rear cover removed to exhibit the mechanism inclosed therein. Fig. 3 is an end view of the indicator-case, showing the key-hole guard or cover in its upper or normal position. Fig. 4 is a similar view showing said guard in its lower position and exposing the key-winding ends of the indicator-ribbon drums. Fig. 5 is an end sectional view of the indicator. Fig. 6 is an enlarged broken detail sectional view of the gong-operating mechanism and showing the releasing mechanism thereof. Fig. 7 is a detail view of the striking mechanism of the gong, and Fig. 8 is a detail view of the winding-key of the ribbon-carrying drums.

The indicating-ribbon has the names of the various stopping-stations printed in large clear type on its face in the regular order of succession and is rolled on and carried by the ribbon-carrying drums 2 and 3 with its printed surface or face turned toward the longitudinal slot or opening 4, formed in the front

of the inclosing-case 5 of the indicator. The drums 2 and 3 are each journaled at their ends in suitable bearings secured to the ends of the case 5. One of the ends of each of the journals of the ribbon-carrying drums is prolonged beyond its journal-bearing and is flush with the outer surface of the end of the case 5, and each of these prolonged ends of the journal are formed square for a portion of their length to form key-fits 6, whereon the winding-key 7 of the drums is applied.

The gong 8 is sounded or operated by means of a suitable clockwork driven by a clock-spring in the usual well-known manner, and is provided with a striking-hammer 9, which is actuated by an escapement-wheel 10, all of which mechanism being carried by the same separable frame 11 and inclosed by the gong 8.

Any suitable gong actuated by clockwork or other means, as electricity, may be used in connection with my station-indicators, as such does not form a part of my invention.

The striking-hammer 9 is held or engaged to prevent its striking the gong 8 by the collar 12 on the staff 13, and said collar 12 is held in contact with said hammer 9 by the coil-spring 14. To release the hammer 9 to permit it to strike the gong 8, the staff 13 is moved longitudinally to disengage the collar 12 from said hammer, which movements further compress the coil-spring 14, which latter moves the said staff into its normal position when the shaft is released.

The spring-cam 15 is secured at its end to the inner surface of the casing 5, and has its free end projecting or lapping over the end of the staff 13. The enunciating-lever 16 is fulcrumed at a point intermediate between its ends, and is provided with the coil-spring 17, secured in any suitable manner to the casing 5 and bearing against the end of the lever 16, and by which said lever is moved and held in its normal position, as shown in full lines in Fig. 2. The inner or free end of the lever 16 extends or laps over the spring-cam 15, below the bend thereof, in such a manner that when the arm of the said lever 16 is moved in the position shown in dotted lines (see Fig. 2 and detail Fig. 6) the spring-cam 15 will be compressed to push the staff 13 in the direction of the arrow and thereby release

the collar 12 from the hammer 9. The outer reduced end 18 of the lever 16 projects through a notch or slot 19, formed in the key guard-plate 20.

5 The key guard-plate 20 is formed of a flat metallic material, preferably of sheet brass, and has the lower bend or finger-catch 21 formed thereon, and is provided with the guide-slots 22, adapted to receive the guid-
10 ing-pins 23, which are secured in the casing 5, and by which said guard-plate is held on said casing 5 to slide vertically thereon.

The slots 22 of the guard-plate 20 are of a sufficient length to permit the downward
15 movement of said guard-plate to cause the key-openings 24 to fall opposite or register with the key-openings 25, formed in the end of the case 5, and in these openings the wind-
20 ing-key is inserted and applied on the square or key ends of the journals of the ribbon-carrying drums when the said guard-plate is moved into the position shown in Fig. 4.

The names of the various stopping-stations of a railway or branch thereof are printed on
25 one side of the ribbon in their regular order of rotation along the line of travel, and when a train has either left a station or is approaching another or the next consecutive station, an official provided with the proper key, as shown
30 in Fig. 8, pulls the guard-plate 20 into the position shown in Fig. 4, thus uncovering the

key-fits of the tape-carrying drums, which he turns till the next consecutive name of the stopping-station is exhibited through the slot or opening 4. The downward movement of 35 the guard-plate 20 rotates the lever 16, the inner end of which compresses the cam-spring 15, thus moving the staff 13, and, disengaging the hammer 9 of the gong 8, allows the alarm to sound, which alarm continues while the 40 guard-plate 20 is held in its lower position.

Having thus fully described the construction, use, and operation of my invention, what I claim as new and useful, and desire to cover by Letters Patent of the United States 45 therefor, is—

In a station indicator, the combination with an inclosing casing, upper and lower key winding drums and an indicator ribbon, of an alarm mechanism on said casing, a guard 50 over the key winding ends of said drums, a cam spring, a lever having one end lapping over said cam spring and its opposite end engaging said key guard plate, substantially as and for the purpose set forth. 55

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

WILLIAM J. HULL.

Witnesses:

T. LA VERNE RAMSAY,

H. M. GOOLD,