J. HUTCHINSON.

CHANGEABLE INDICATOR.

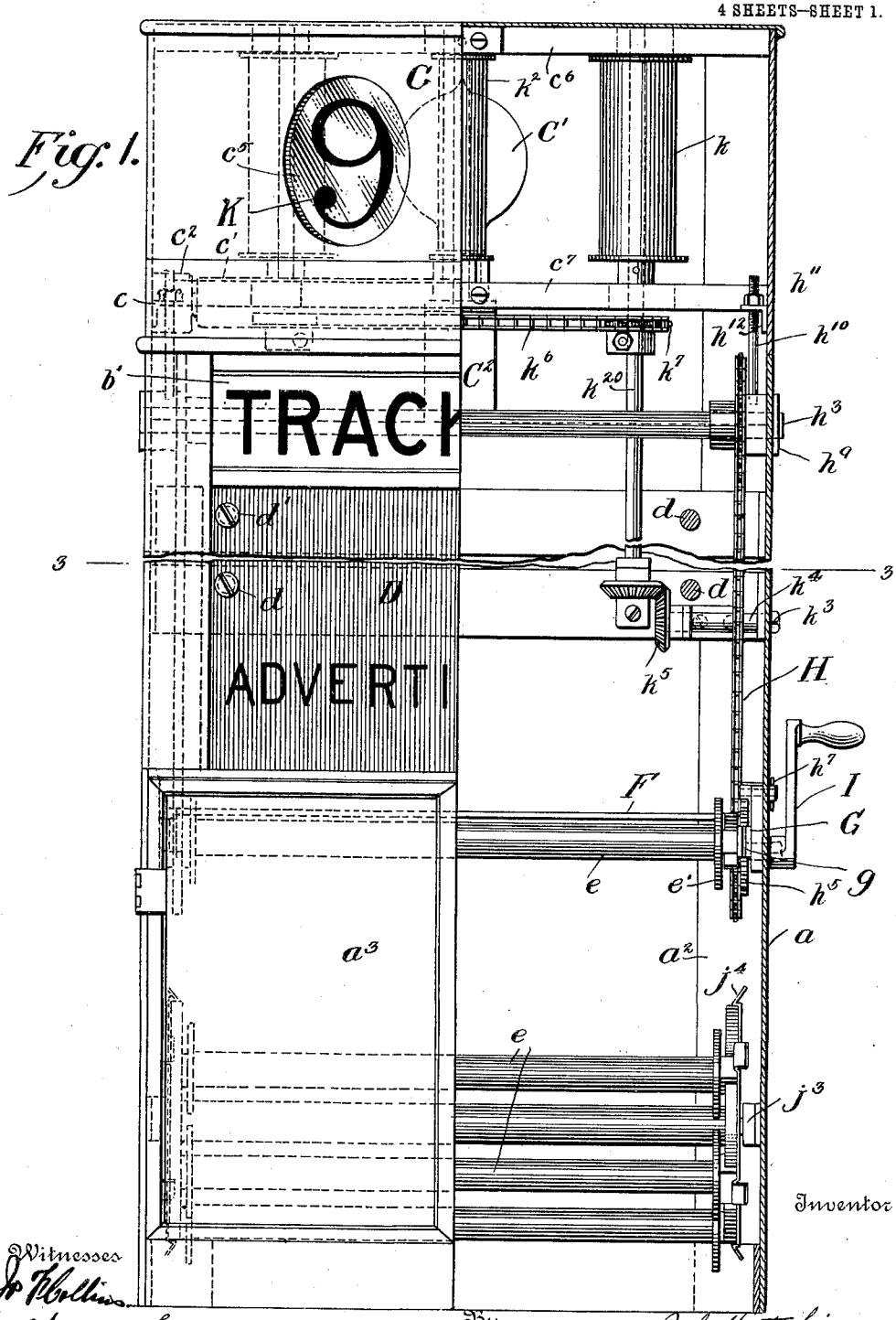
APPLICATION FILED APR. 9, 1910.

1,067,251.

Patented July 15, 1913.

4 SHEETS—SHEET 1.

Fig. 1.



COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

J. HUTCHINSON.

CHANGEABLE INDICATOR.

APPLICATION FILED APR. 9, 1910.

1,067,251. **Patented July 15, 1913.**

4 SHEETS—SHEET 2.

Fig. 2.

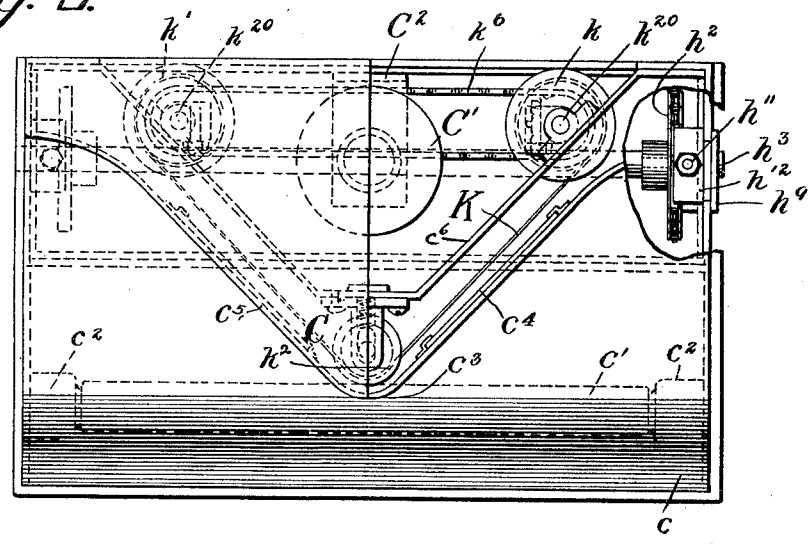


Fig. 3.

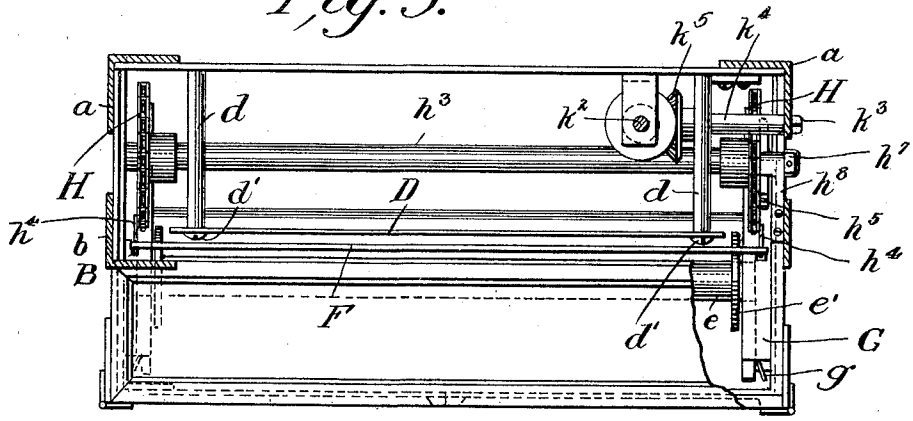


Fig. 4.

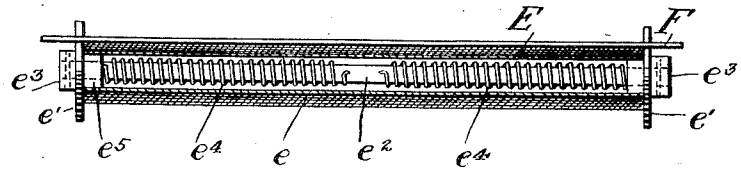
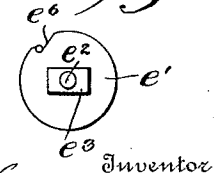


Fig. 5.



Witnesses

Jo. F. Collins.

Wm. E. Tucker.

Inventor

Job Hutchinson,

By Spencer B. Prentiss,

Attorney

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

J. HUTCHINSON.

CHANGEABLE INDICATOR.

APPLICATION FILED APR. 9, 1910.

1,067,251.

Patented July 15, 1913.

4 SHEETS—SHEET 3.

Fig. 7.

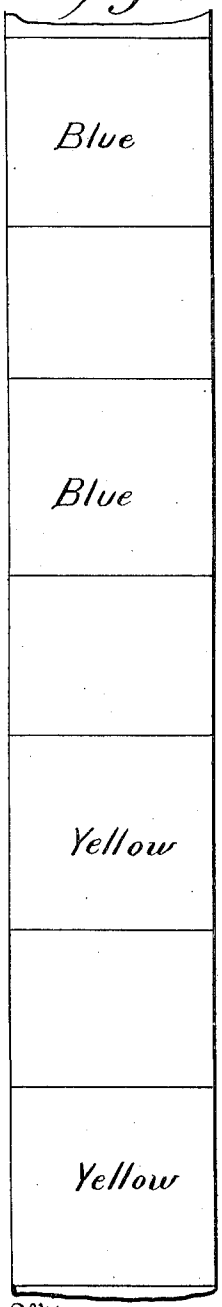
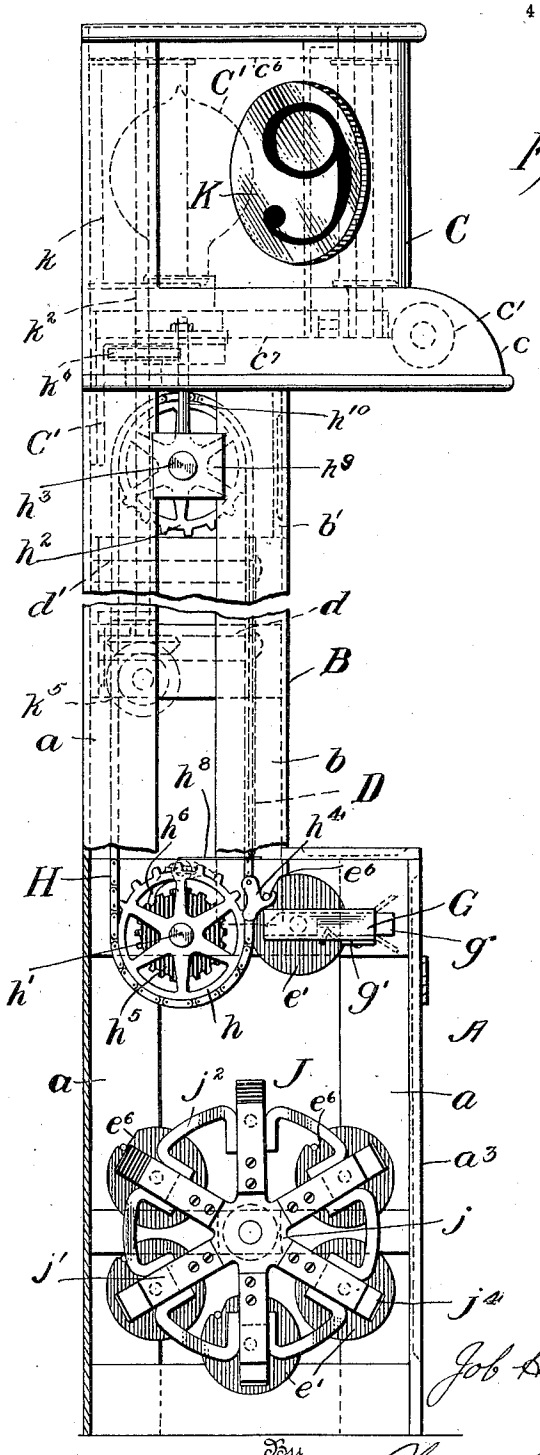


Fig. 6.



Witnesses

Jos. F. Collins

Wm. E. Tucker

Inventor

Job Hutchinson,

By

Spencer B. Preston,

Attorney

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

J. HUTCHINSON.

CHANGEABLE INDICATOR.

APPLICATION FILED APR. 9, 1910.

1,067,251. **Patented July 15, 1913.**

4 SHEETS—SHEET 4.

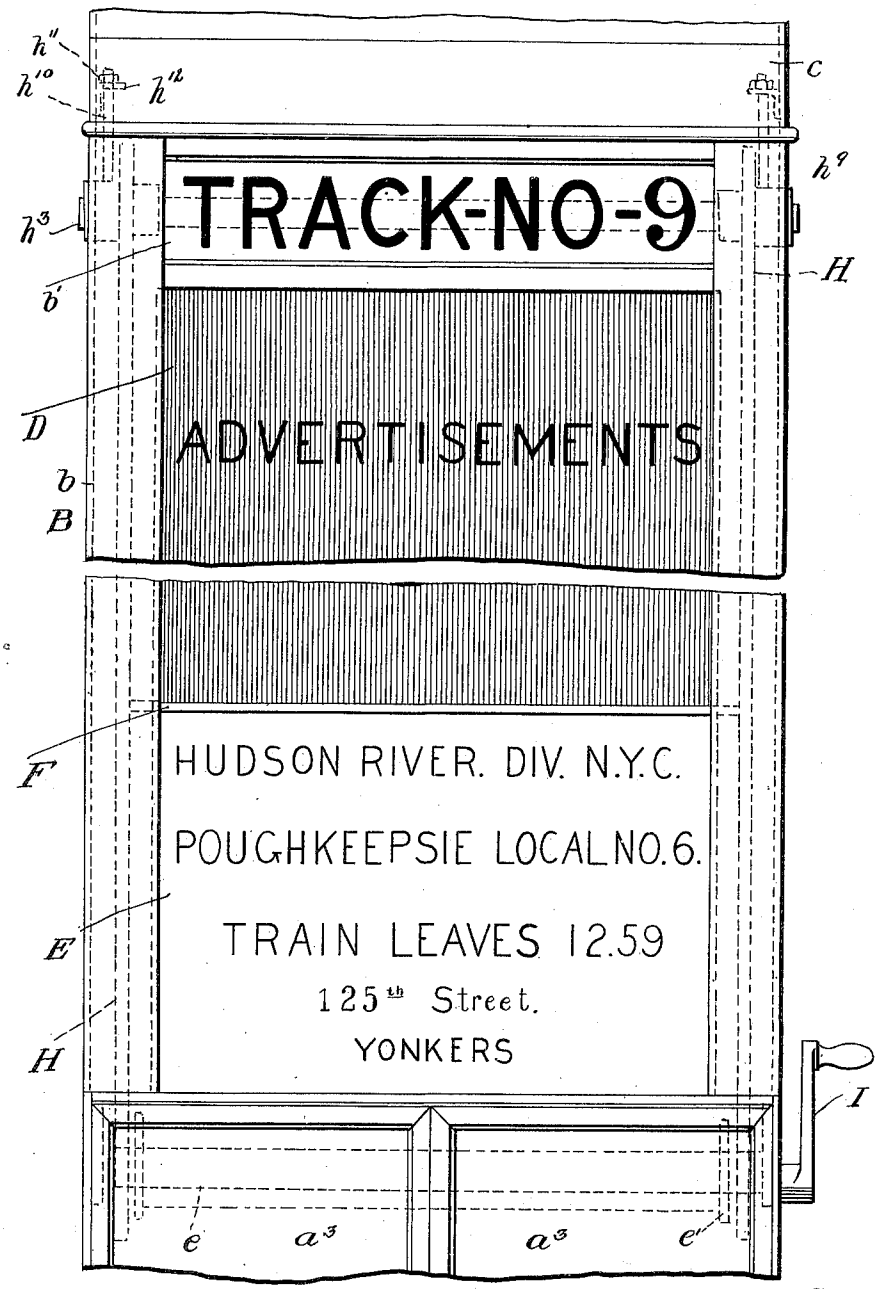


Fig. 8.

Inventor

Witnesses

Jno. J. Collins.

Jos. Hutchinson,

Jm. E. Tucker.

By Henry B. Newton,

Attorney

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOB HUTCHINSON, OF NEW YORK, N. Y., ASSIGNOR TO NATIONAL INDICATOR COMPANY, A CORPORATION OF NEW YORK.

CHANGEABLE INDICATOR.

1,067,251. Specification of Letters Patent. **Patented July 15, 1913.**

Application filed April 9, 1910. Serial No. 554,480.

To all whom it may concern:

Be it known that I, JOB HUTCHINSON, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented new and useful Improvements in Changeable Indicators, of which the following is a specification.

My invention relates to the public display of information in general, and particularly to indicators in which the display or a portion may be changed.

More specifically, the invention relates to changeable indicators for railway depots or stations.

The principal objects of the invention are to provide a changeable indicator which will enable a person entering a railway depot or station where there are a number of tracks for the departure of trains, to select instantly and readily the track from which his train is to depart; which will give its indication at night as well as in the day; in which the indication may be readily and quickly changed; to combine advertising features with the indicator; and generally to improve the construction and operation of such devices.

In carrying my invention into effect, I construct the indicator in what may be considered three principal sections; a base in which a portion of the operating mechanism is mounted, and which provides space for the storage of indicating elements to be used with the indicator; an intermediate section upon which the main display indication is made; and a top section, which may be removable, which gives a pilot indication and carries the lamps for its own illumination and that of the intermediate section.

The main changeable indication is effected by means of curtains, each of which is inscribed with the proper information, and mounted on a spring roller. A curtain is drawn from its roller into the display position on the intermediate section of the machine by sprocket chains having suitable operating and controlling mechanism.

In connection with my indicator I employ what may be termed a "color scheme", which I consider an important part of the invention. This "color scheme" as at present used is carried out in the following manner: The main display indication is, in the embodiment of my invention herein described, a curtain which may be removed and another substituted, each curtain containing a complete schedule including the name and number of train, branch or division of road, time of departure, and list of stations at which the train is to stop. The curtains for the various branches or divisions of the road are given distinctive colors, and the time-tables or folders of the divisions or branches furnished passengers are printed on paper of corresponding colors, or are otherwise provided with that color, each branch or division having its own distinctive color.

The top section of the indicator is provided with windows or panels facing in different directions, a light being placed behind them and means being provided to change the color shown at these windows or panels to correspond with the color of the division schedule or folder and the curtain for the train being designated.

For a more complete understanding of the invention and the construction by which the same may be carried into effect, reference should be made to the accompanying drawings, taken in connection with the following description, in which the same is more fully set forth.

In the drawings, Figure 1 is a front view of the indicator in elevation, the portion to the right of a vertical central line having the front facings removed to show the mechanism within, and a portion from the center being broken away so as to reduce the height; Fig. 2 is a plan view in which the cover of the right-hand portion is removed, and a part to the right broken away to show one of the sprockets with its shaft and bearing; Fig. 3 is a horizontal section on the line 3—3 of Fig. 1; Fig. 4 is a longitudinal section of one of the curtain rolls; Fig. 5 is an end view of the same; Fig. 6 is a view in side elevation of the indicator as shown in Fig. 1, the outer casing of the lower section being broken away; Fig. 7 is a view of the color screen for the top section; and Fig. 8 is a front view in elevation of the main display portion of the indicator having suitable inscriptions thereon, and showing the curtain partly raised toward its display position.

Referring to the drawings, it will be seen that the indicator comprises a base section A, a main display section B, and a top or

pilot section C. The frame may be constructed in any suitable manner, and is shown as having uprights a for the base section, the rear ones of these being extended upwardly for the main display section B. The front uprights b and the facing side strips b', together with back strips a^2 complete the frame for these two sections. The front of the base section is closed by doors a^3. The spaces between these frame strips are of course closed by suitable panels, these latter being omitted in order to better show the mechanism within and to avoid complication of the drawings.

The top or pilot section C is preferably made separate from the main frame, and may be removed bodily therefrom. Its construction will be described hereinafter.

D represents a false front or panel forming a face plate for the mechanism within the main display section B, and is mounted upon posts d secured to back strips of the main frame. Screws d' secure this panel D to said posts, so that the panel is free around its sides and lower edge from the main frame. This panel performs the double function of a front for the mechanism within the indicator, and of a support for advertisements which may be secured thereon and displayed whenever no train schedule or other indication of the indicator is made. When the indicator is employed for trains in a railway station, as intended, such advertisements will be very effectual, and will be a large source of income to the operating company.

The main display indication is effected by means of a curtain E, which may be inscribed with any information desired, such as, in the case of a railway indicator, the branch or division of the road, the name and number of the train, the time of departure, and a list of the stations at which the train is to stop. This curtain is mounted upon a spring roller e which may be similar to the ordinary shade roller. As shown in Figs. 4 and 5, it consists of a tubular body having ends or heads e', and a central shaft e^2. The central shaft e^2, is attached to squared end blocks e^3, to which heads e' are also secured, and coil springs e^4 are secured at one end to said shaft and at the other ends to blocks e^5 which rotate on shaft e^2. A rod F is attached transversely to the free end of the curtain E and has its ends projecting beyond the heads e'. Each head is notched correspondingly at e^6 to receive rod F when the curtain is wound upon the roller by the action of the springs, this particular arrangement serving to prevent the spring of the roll from releasing all of its tension, the structure acting as a stop for the re-winding action of the spring.

In the upper portion of base section A are arranged guides G formed to receive end blocks e^3 of a curtain roller, and hold the same in position to be wound into its display position upon main section B. The entrance end of each guide G is preferably provided with flaring guides g, and springs g' are provided to hold the roller in place within the guide.

In order to unwind a curtain from its roller, I provide sprocket chains H or other flexible connections arranged in duplicate, one upon each side of the main section B, each of these chains passing over a drive sprocket h mounted upon a shaft h', and also over an idle sprocket h^2 mounted on shaft h^3 in the upper portion of main section B. These chains carry hooks or hook links h^4 arranged to engage the projecting ends of curtain rod F. The drive sprockets are operated from the outside of the indicator by means of a crank I, which fits the squared projecting end of shaft h'.

In order to hold the shaft h' and its sprockets in any adjusted position, I provide a ratchet wheel h^5 fast upon said shaft, and engaged by a double pawl h^6, operated by a handle h^7, to engage said ratchet wheel h^5 and restrain the same from motion in either direction. A spring h^8 engages the stem of this ratchet pawl, and maintains the same in any adjusted position.

Within the base section A I arrange a rack J consisting of a central hub j with radial arms j' connected by yokes j^2. This rack is rotatable in bearings j^3, and is provided with guides to receive the end blocks of the rollers, and with springs j^4 to hold them in place. A number of rollers may thus be stored within the machine itself and be readily accessible, it being understood of course that additional rollers for this and other machines may be kept in a separate storage receptacle.

The top or pilot section C comprises a lower portion which rests upon the main section B, and projects forwardly in the form of a reflector-hood c within which is arranged a tubular electric lamp c' mounted in sockets c^2. This lamp illuminates the main section B, and also the fixed board b' upon which is inscribed the track number. The upper portion of the top section is arranged to display the track number, and also to operate as a pilot display in conformity with my color scheme. This is effected preferably by means of a light and a color screen illuminated thereby. In order that this may be better seen from different directions, this portion of the top section is arranged to show the color screen in different planes, and includes a face plate bent in the center at c^3 and extending rearwardly toward the corners of the top. Each face is provided with an aperture preferably having a glass panel c^4, c^5 upon which the track number is painted. The color screen

preferably consists of a movable translucent web K attached to the coöperating reels k, k' and adapted to be reeled back and forth from one to the other over the central spring-pressed roller k^2. Both of the said reels and roller are mounted upon the angle frames c^6 and c^7 as shown.

Each reel is mounted upon a vertical spindle k^{20}, one of which is extended downwardly and may be operated from the outside of the frame by means of the same crank I as above described which fits the squared end k^3 of a short shaft k^4. This short shaft is connected to the vertical shaft k^{20} by means of bevel gears k^5.

The shafts k^{20} are geared together by a sprocket chain k^6 passing over sprockets k^7 which are adjustably mounted upon the said shafts in a manner similar to that fully described in my co-pending application S. No. 538,895, and need not be further described here.

A lamp C′ is mounted behind the color screen K upon a suitable bracket C^2.

The color screen K may be made of silk or other flexible translucent webbing, and is colored in sections, as shown in Fig. 7, so as to display the same color simultaneously at each of the panels c^4, c^5, these colors corresponding to the colors of the curtains for the various branches or divisions of the road, and of the folders or time tables printed for distribution among passengers. It will be observed that blank spaces exist upon the webbing between the colored sections, but by properly proportioning the size of panels c^4 and c^5 and the distance between them, the double color sections may be made to alternate, thereby reducing the length of the webbing.

The shaft h^3 of the upper sprockets is preferably mounted in adjustable bearing blocks h^9 which are notched to engage the side frame strips and are suspended by bolts h^{10} with their nuts h^{11} seated upon brackets h^{12}.

The operation of my improved indicator will be apparent from the foregoing description, and may be briefly outlined as follows: Ordinarily the advertisements upon panel D will be displayed to persons passing before the indicator. When it is desired to indicate the departure of a train, the proper curtain roll is selected and placed in guides G. The pawl h^6 is then moved to release the operating sprockets, and the crank I is put in position and turned in the proper direction to cause the upward motion of hooks h^4. These latter engage the ends of the curtain rod and carry the same upwardly in front of panel D until said rod disappears behind the board b', thereby obscuring the advertisements and displaying the train data or complete schedule upon the curtain. The pawl h^6 is then moved to maintain the curtain in its adjusted position. If preferred, the pawl may be provided with opposite sloping surfaces, either of which is engaged by spring h^8, thus causing the pawl to act as a ratchet in either direction. The color screen K is then adjusted by means of the crank operating through spindle k^4 and shaft k^{20}, thereby winding said screen from one reel to the other until the desired color appears at both transparent panels c^4, c^5. The color screen is maintained stretched by the spring-pressed roller k^2.

It will thus be seen that a person entering the railway station may at once locate the track from which his train departs, by observing the color displayed in the pilot section of the indicator. He is thus enabled to go at once and without hesitation to the right gate, and there he will see the full display of his train information upon the curtain. The curtains are preferably of waterproofed material, and are inexpensive and durable. They may be readily selected, and are easily and quickly inserted and adjusted upon the indicator, and the color screen is also readily adjusted. The entire operation is positive, and the parts are simple, strong and positive in their action.

I am aware that many changes may be made in the details of construction and arrangement of parts of my invention indicator without departing from the spirit of the invention, and all such I aim to cover by the appended claims. For instance, other means than that shown may be employed to give the pilot indication.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a changeable indicator, the combination with a train indication portion, of a pilot portion above said train indication portion provided with changeable color screens, a spring re-wind curtain roller coöperating with said train indication portion and having a curtain lettered with train data, a rod attached to the outer end of said curtain and having projecting ends, sockets for the spindle of said roller, drive sprockets mounted adjacent said sockets, idle sprockets cooperating with said drive sprockets at the upper part of said train indication portion, adjustable bearings for said idle sprockets supported from said pilot portion, and sprocket chains passing around said driving and idle sprockets and provided with hooks for engaging said curtain rod, the hooks being engaged with the rod during both unwinding and re-winding movements of the curtain.

2. In a changeable indicator, the combination with a main indication portion, roller guides adjacent thereto, a spring re-wind roller engaging said guides, a display curtain attached to said roller, a transverse rod

at the outer end of said curtain, operating sprockets adjacent said roller, coöperating sprockets in the upper part of said main display portion, sprocket chains engaging said sprockets and carrying corresponding hooks to engage said rod, means for operating said sprockets to draw out said curtain over said display portion, and a pawl and ratchet for said sprockets arranged to hold the parts in an adjusted position.

3. In a changeable indicator, a spring rewind roller comprising a tubular body portion, head members having holding blocks secured thereto, a spring connection between said body portion and at least one of said head members, a display curtain attached to said roller and having a transverse rod at the outer end thereof, said heads being provided with means for engaging and holding said rod when said curtain is wound up.

4. In a changeable indicator, a spring rewind roller comprising a tubular body portion, perforated end blocks for said body portion, a spindle passing through and journaled in said end blocks, a holding block mounted on the end of said spindle, heads for said tubular portion at least one of which is secured to said holding block, a spring having one end secured to said spindle and the other end to one of said end blocks, a curtain attached to said roller, an end rod for said curtain, said heads being formed with corresponding notches in which rest the ends of said end rod.

5. In a changeable indicator, a spring rewind roller comprising a tubular body portion, perforated end blocks for said body portion, a spindle passing through and journaled in said end blocks, a holding block mounted on each end of said spindle, heads for said tubular portion secured to said holding blocks, a spring connection between said spindle and said end blocks, a curtain attached to said roller, an end rod for said curtain, said heads being provided with means for engaging and holding said rod when said curtain is wound up.

6. A changeable indicator comprising a base section, a pair of side strips uprising from each end of said base section, the strips of each pair being spaced apart, a top section mounted on said side strips, bearing blocks adjustably suspended from said top section and slidingly mounted between the strips of said pairs as guides, sprockets mounted on said bearing blocks, coöperating sprockets mounted on said base section, hook-carrying sprocket chains on said sprockets, and a display curtain in operative relation to said hook-carrying sprocket chains.

7. A changeable indicator comprising a frame, a panel mounted on said frame and spaced from the lateral sides thereof, a flexible web mounted at one edge of said panel, and means operating through the spaces between said panel and frame for drawing said web into display position over the face of said panel.

8. A changeable indicator comprising a frame, a panel mounted on said frame and spaced from opposite sides thereof, a cover strip set out and over each space, a flexible web mounted at one edge of said panel with its lateral edges under said cover strips, and means concealed by said cover strips operating through the spaces between said panel and frame for drawing said web into display position over the face of said panel.

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

JOB HUTCHINSON.

Witnesses:
J. E. HUTCHINSON,
WILLIAM WEILER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."