(No Model.) 2 Sheets—Sheet 1.

J. B. BARNET.

INFORMATION TABLET OR INDICATOR.

No. 420,712. Patented Feb. 4, 1890.

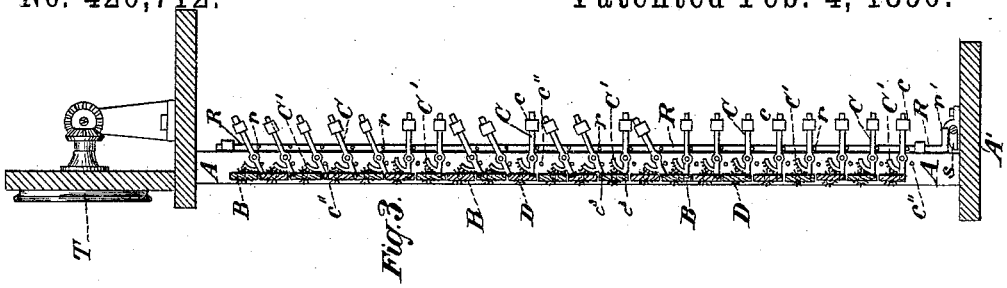

Fig. 3.

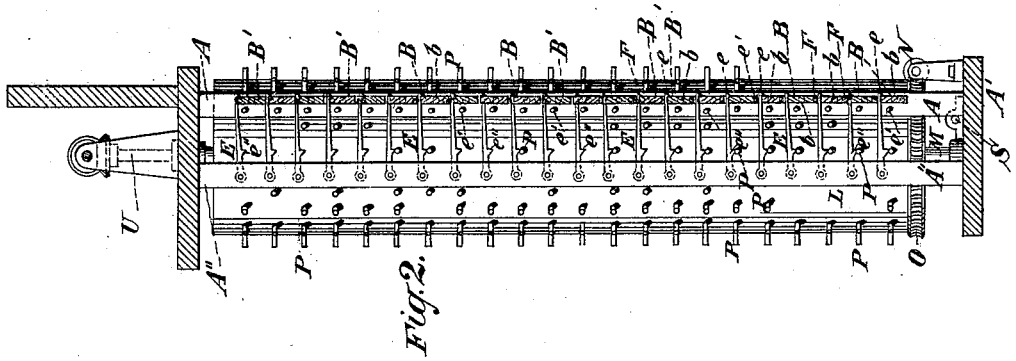

Fig. 2.

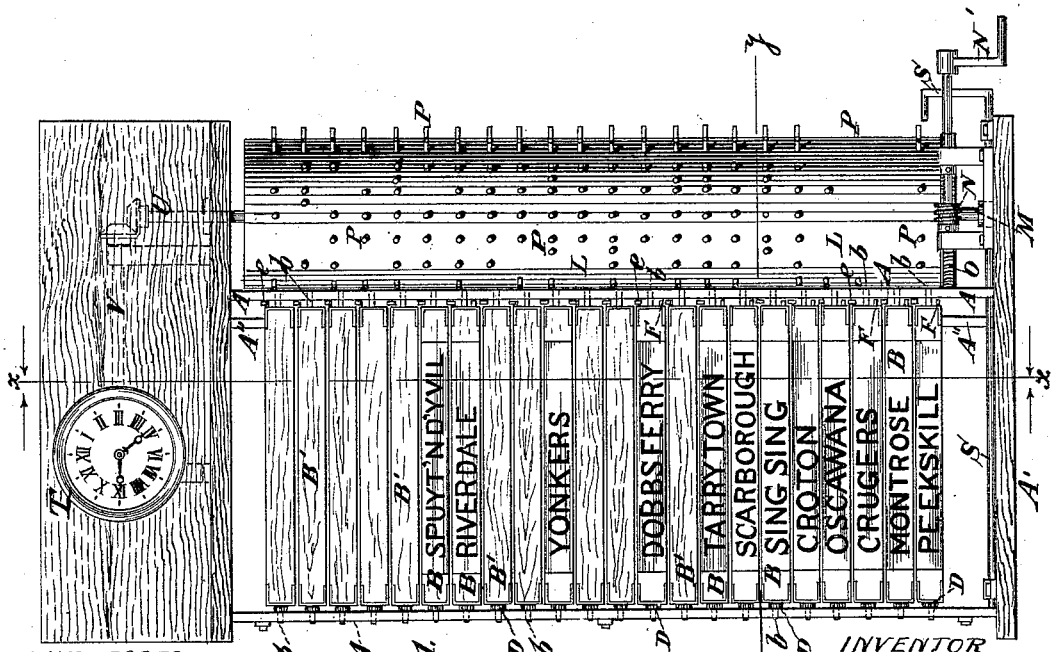

Fig. 1.

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(No Model.) 2 Sheets—Sheet 2.

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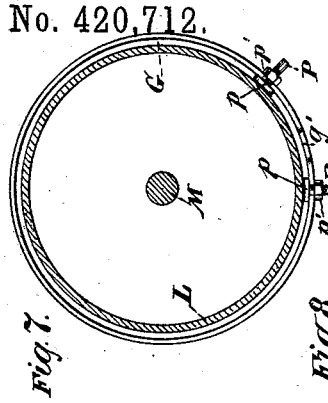

Fig. 7.

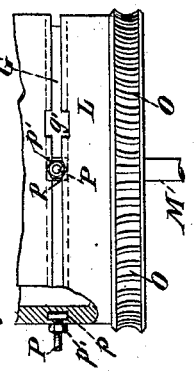

Fig. 8.

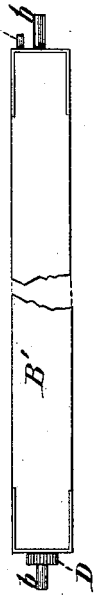

Fig. 9.

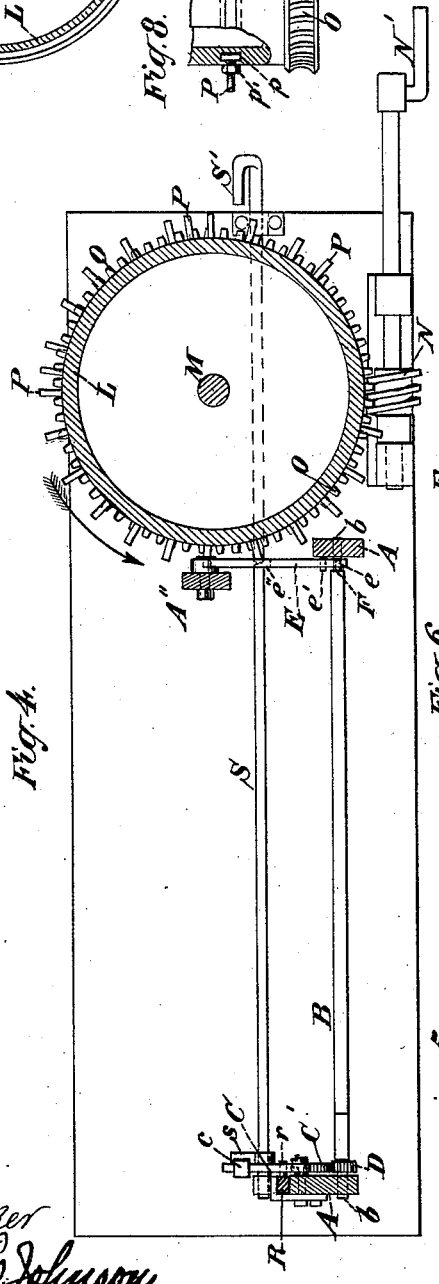

Fig. 4.

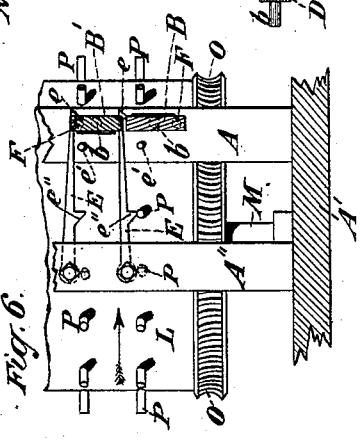

Fig. 6.

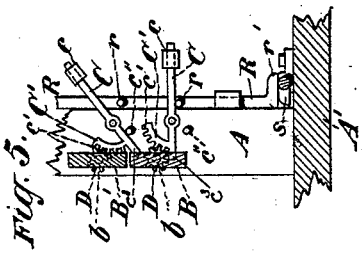

Fig. 5.

WITNESSES

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UNITED STATES PATENT OFFICE.

JAMES B. BARNET, OF TARRYTOWN, NEW YORK.

INFORMATION TABLET OR INDICATOR.

SPECIFICATION forming part of Letters Patent No. 420,712, dated February 4, 1890.

Application filed September 17, 1889. Serial No. 324,230. (No model.)

To all whom it may concern:

Be it known that I, JAMES B. BARNET, a citizen of the United States, and a resident of Tarrytown, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Information Tablets or Indicators, of which the following is a specification.

My invention is an improvement in that class of information tablets or indicators in which a series of names or words are displayed in different orders or combinations, and refers particularly to the tablets or indicators used in railroad or steamboat depots to inform travelers of the time at which the train or boat departs and the places at which it stops, and such other information as may be necessary.

In the indicators heretofore used it has been necessary to set the time of the departure of the train and the name of each station separately, or to have some separate distinct device for each train by which the indicator is arranged or set for that particular train.

My improvement is designed to produce an indicator in which the whole time-table or schedule for the day is arranged on the indicator itself, so that by merely moving the mechanism the indicator will automatically set the stations at which the train or boat stops and the time of departure of each train in the regular order of the time-table or schedule, and which will be simple in construction and easy in operation.

In the drawings illustrating my improvement, in which like letters indicate like parts, Figure 1 is a front elevation of my improved indicator with the outer case removed to show the construction and arrangement of the mechanism. Fig. 2 is a side elevation, partly in section, through the line *x x*, looking toward the revolving barrel. Fig. 3 is a side elevation, partly in section, through the line *x x*, looking away from the revolving barrel and toward the opposite side. Fig. 4 is a plain sectional view through the line *y y*, Fig. 1. Fig. 5 is a detached sectional view of one end of the revolving slats and the mechanism for moving the same. Fig. 6 is a detached sectional view of the opposite ends of the revolving slats, showing the latches for holding the same and the barrel with the pins for engaging and operating the latches. Figs. 7 and 8 show a modified construction of the barrel or drum and of the pins on the same. Fig. 9 is a detached view of one of the slats.

The drawings illustrate the simplest form and construction of my improvement. As there shown, the indicator or tablet consists of an upright frame A, in which are mounted a row or series of slats or flat strips B, of wood or any suitable material, arranged one above the other. On one side or face of each slat, as B, is placed the name of a station or stopping-place on the line of the road, the other side being left blank, as at B′, and the names of the stations are arranged in regular order, the first station or the one nearest the starting-place being at the top of the series. These slats are supported or mounted on axles *b*, which turn in the frame A, and by means of which the slats can turn over or revolve, so as to expose either the blank side B′ or the side having the name of a station to the front of the indicator, as will be understood from Fig. 1.

On the upright frame A, on one side of the slats B, is a row or series of levers C, which are pivoted to the inside of the frame opposite to and back of each slat, and are arranged to turn or move up and down, as will be seen in Figs. 3 and 4, and more particularly in the enlarged view in Fig. 5. These levers consist of the long arm C, having on its outer end the adjustable weight *c*, and near its inner end next to the slat the short curved arm C′. This curved arm C′ is provided on its outer edge with teeth *c*′, as will be seen from Fig. 5, and is so arranged as to engage with a small cog-wheel D on the axle *b* of the slat. (Shown more fully in Fig. 9.) The construction and arrangement of the lever are such that as the arm C is moved up or down the arm C′, engaging with the wheel D, turns the slat over or causes it to make a half-revolution, so as to bring the blank side B′ or the lettered side B to the front of the indicator, as shown in Fig. 5. The lever is moved up or raised by the sliding rod R, as hereinafter described, and is caused to turn down or descend by the weight *c* on the arm C. The ad-

justment of the lever with reference to the slat is such that when the arm C is moved up the blank side B′ of the slat is brought toward the front of the indicator, and when the arm C is down the lettered side B is turned to the front, as will be understood from Fig. 5. The upward movement of the lever and the corresponding rotation of the slat is controlled and limited by the pin c'' on the frame A, and the downward movement of the lever and rotation of the slat in the opposite direction by the projecting end c^3 on the lever, which comes in contact with and rests against the cog-wheel D when the lever is down, as shown in Fig. 5, and hence the slats are always turned and held so their faces B and B′ are vertical or in a perpendicular plane, and facing the back and front of the indicator. On the other side of the row of slats B from the levers C are a series of latches E. (Shown in Figs. 2, 4, and 6.) These latches are pivoted to a post or standard A″ in the rear of the slats, and extend toward the front of the indicator and past the end of each slat directly above the axle *b*, and terminate just beyond the front face of the row of slats, as will be seen in Figs. 4 and 6. The outer end of the latch is provided with a beveled catch *e*, which engages with a pin F, which projects from the end of the slat near one edge, as is shown particularly in Figs. 6 and 9. The latch is held by the stud *e′* on the frame A in such a position that when the slat is turned in one direction, so as to bring the edge having the pin F uppermost, the pin striking the beveled end of the latch raises the latter until the pin has passed beyond the catch *e*, when the latch falls, and, engaging with the pin, locks and holds the slat. The pin F is situated near that edge of the slat which is uppermost when the blank side B′ of the slat is turned to the front of the indicator, or near that edge which is uppermost when the slat is turned by raising the lever C, as before described. Hence when the slat is turned by raising the lever C, the latch E, engaging with the pin F, holds the slat in this position with the blank side B′ to the front of the indicator and the arm C of the lever raised, as will be understood by reference to Figs. 1, 2, and 3. The position of the catch *e* with reference to the pin F is such that the catch does not engage with the pin until the slat is turned so as to bring the faces or sides of the slat in a perpendicular plane.

When the latch E is raised so as to disengage the pin F from the catch *e*, the weight *c*, acting on the long arm of the lever C at the other end of the slat, moves or turns the lever down and thus revolves the slat so as to bring the lettered side B to the front of the indicator, as shown in Figs. 1, 2, and 3. The pin F is then at the lower edge of the slat and the latch E rests on the stud *e′* in position to engage with the pin when the slat is turned back again. The operation of the slats is as follows: The blank sides B′ are turned to the front of the indicator by raising the levers C, when they are held in this position by the latches E engaging with the pins F. To turn the lettered side of a slat or the side bearing the name of the station to the front of the indicator, the latch E corresponding to that slat is raised, thus disengaging the slat, when the lever C, being free to act, is moved down by the weight *c* and the slat caused to revolve so as to turn its lettered side to the front of the indicator. The slats are securely held with their sides or faces in a perpendicular plane or with their edges vertical by the latches E when the blank sides B′ are front, and by the weights *c* on the arms of the levers C when the lettered sides B are turned to the front. Hence the slats cannot, by any accident, be turned from a vertical position, but are always held so the names on their sides can be easily seen. On the under side of the latches are beveled points or projections e'', which are arranged to engage with the pins on the revolving barrel, as hereinafter described.

The levers C are raised to turn the blank sides B′ of the slats outward by the vertically-sliding rod R, Figs. 3 and 5. On one side of this rod are a row of pins *r*, so placed that when the arms C of the levers are down they will be directly above the pins, as shown in Figs. 3 and 5.

The rod R is raised or moved up by the horizontal rod S, which for convenience extends to the opposite side of the indicator and terminates in the crank S′. At the foot of the rod R is a short section *r′*, extending out from one side of the rod, as will be seen from Figs. 3 and 5. The rod S, where it engages with the vertical rod R, is provided with the short right-angle section *s*, which rests directly under the foot-section *r′*, extending from the rod R, as is shown in Figs. 3 and 5. As will be understood from the drawings, when the rod S is turned by the crank S′ in one direction the section *s*, engaging with the foot *r′*, raises or lifts the latter and thus raises the rod R. As the latter moves up, the pins *r* under the arms C of the levers lift the levers until they revolve or turn over the slats B, when the pins F on the latter engaging with the latches E the levers are held in their raised position, as before described, and the rod R is allowed to slide down by turning back the crank S′.

The latches E are raised to release the slats by a vertical revolving drum or barrel provided with pins on its circumference which engage with and lift the latches as the barrel is turned. This vertical barrel L is placed at the side of the slats next to the latches, and is mounted on the central pivot M, so as to revolve or turn in a vertical plane, as shown in Figs. 1 and 2. From the circumference of the barrel project pins P, so situated as to pass under the latches and engage with the beveled projections e'' as the barrel re-

volves and lifts or raises the free end of the latches. These pins P are arranged on the barrel as follows: The circumference of the barrel is divided into spaces corresponding to the hours and minutes of the day. At that point corresponding to the time at which a train departs is placed a vertical row of pins P, arranged according to the stopping-places of the train, a pin being placed on the barrel opposite each slat B bearing the name of the station at which the train stops. As the barrel is turned on its central pivot, the vertical row of pins, engaging with the projections e'' on the latches E corresponding with those slats, lift the latches, thus disengaging the slats and allowing them to turn over and expose the names of the stations to the spectator, the remaining slats being still held with their blank sides B′ outward by the latches E, which have not been raised. The indicator or tablet thus shows in regular order the names of all the stations at which the train stops, as will be seen from Fig. 1. On the next point or space on the barrel corresponding to the time at which the next train departs is placed a similar row of pins arranged in like manner, according to the slats bearing the names of the stations at which that train stops, and so on with every train during the day. Thus there is arranged on the barrel, according to the time at which the train leaves and the station at which it stops, a row of pins for every train during the day; or, in other words, the whole time-table for the day is arranged on the revolving barrel A, and to set the indicator it is only necessary, after one train has departed, to turn the barrel until the next row of pins is brought into position to engage with the latches E, and the trains being arranged on the barrel in their regular order the indicator is always set correctly. Connected to the barrel L, and operated by the latter, is a clock T, which is preferably placed over the row of slats, as shown in Fig. 1. This clock is operated by the vertical rod U, extending from the top of the barrel, which gears into and turns the horizontal rod V, by which the hands of the clock are moved. Hence, as the barrel L is revolved the hands of the clock are turned, the barrel making one revolution during the day of twenty-four hours. The adjustment of the clock with respect to the row of pins P is such that the hands of the clock are moved by the barrel L to the time at which a particular train starts, as the row of pins P corresponding to that train lift the latches E and allow the particular slats B to turn over to show the names of the stations. The tablet or indicator is therefore set by merely turning the vertical barrel until the clock points to the time when the train leaves, when the series of slats will show all the points or stations at which the train stops, and may be set after the slats have been reversed for the next train by continuing to revolve the barrel.

In the construction shown in the drawings the barrel L is revolved by the worm-gear N O, which is operated by the crank N′; but any suitable mechanism may be used to operate the barrel. The vertical barrel or drum L may be made of any suitable material, as steel or other metal, and the pins P attached to the same in any manner desired; but I prefer the method of fastening the pins illustrated in Figs. 7 and 8. As there shown, a horizontal groove G is formed around the barrel opposite each slat B. This groove extends in under the surface of the barrel, as indicated by the dotted lines, and at some one point is provided with an opening g the full width of the groove. The pin P is attached to a broad base p, the size of the opening g or of the widest part of the groove G. On the shank of the pin next to the base p is a screw-nut p'. As will be understood from the figures, the base p of the pin P is inserted into the groove through the opening g, when the pin may be turned in the groove and fastened at any desired point by the nut p'. The pin may therefore be readily adjusted at any point on the barrel desired, and can be removed from the same if not needed.

The operation of my improved indicator or tablet as described above is as follows: The blank side B′ of all the slats is first turned outward, or to the front of the indicator, by turning the handle or crank S′ of the rod S by which the levers C are raised. The latches E are now in engagement with the pins F on all the slats. When it is wished to set the indicator for the first train leaving the station during the day, the barrel L is revolved by the crank N′ until the hands of the clock point to the time of the departure of the train. At this moment the row of pins P corresponding with the time of the departure of the train on the barrel L pass under the latches E, and the pins engaging with the projections e'' on those latches which correspond with the slats bearing the names of the stations at which the train stops lift the latches from their connection with the pins F and thus free these particular slats, when the latter are immediately revolved or turned over by the weights c on the levers C, so as to expose or bring their lettered sides to the front of the indicator. The tablet or indicator is now set for the train, and shows the time at which the train departs and the names of all the stations at which it stops in regular order. After the departure of the train the slats before turned over are reversed or turned back again by the crank S′, so that the blank sides B′ of all the slats are outward as at first. The barrel L is then revolved as before until the clock indicates the time of the departure of this second train, when the pins P corresponding with the time of that train on the barrel

L will have engaged with and raised the latches E of the particular slats and allowed the latter to turn over and thus expose the names of the stations at which this second train stops. On the departure of this train the operation is repeated, and so on throughout the day until the barrel L has been turned completely around, or made a full revolution, when all the trains on the time-table will have been indicated.

As will be seen, the operation of my indicator is automatic, and to set the indicator for a subsequent train it is only necessary to reverse the slats before turned over and turn the barrel until the clock indicates the time of the departure of the train and the slats bearing the names of the stations at which the train stops have turned over and exposed their lettered sides.

Should it be desired to change the time at which a train leaves on any occasion, the clock may be set independently of the barrel L, and if it is wished to send out a special train not on the time-table, or have a train make special stops, the slats B may be turned over by merely raising the ends *e* of the latches E from the front of the indicator.

In my improvement, therefore, the indicator is set for each train in regular order, according to the time-table, and yet may be readily set for any special occasion without reference to the automatic mechanism. In case a change is made in the time-table, the pins P are rearranged on the barrel L, the pins being so secured on the surface that they may be readily adjusted as desired.

What I claim as new is—

1. In an information tablet or indicator, the combination, with a series of movable signs, of a revolving cylinder or barrel having on its surface projections adapted and arranged to engage with and operate the movable signs as the barrel revolves, as and for the purpose set forth.

2. In an information tablet or indicator, the combination, with a series of movable signs containing the names of the stations, of a revolving cylinder or barrel having on its surface adjustable pins arranged according to the schedule of the trains and adapted to engage with and operate the movable signs as the barrel revolves, as and for the purpose set forth.

3. In an information tablet or indicator, the combination, with a vertical series of revolving slats B containing on one side the names of the stations, of a vertical revolving barrel L, having projecting from its surface adjustable pins P, capable of being arranged with reference to the slats B, according to the schedule of the trains, and adapted to engage with and operate the slats as the barrel revolves, as and for the purpose set forth.

4. In an information tablet or indicator, the combination, with a series of movable signs, of a revolving cylinder or barrel having on its surface projections adapted and arranged to engage with and operate the movable signs, and a clock arranged to be operated by the revolution of the barrel, substantially as described.

5. In an information tablet or indicator, the combination of the vertical series of revolving slats B, the vertical revolving barrel L, having the adjustable pins P, capable of being arranged on the surface of the barrel with reference to the slats B according to the schedule of the trains, and adapted to engage with and operate the slats, and the clock T, connected with the barrel and arranged to be moved by the revolution of the latter, substantially as and for the purpose set forth.

6. In an information tablet or indicator, the combination of the vertical revolving barrel L, having the adjustable pins P on its surface, adapted to engage with the latches E, the revolving slats B, operated by the levers C and held by the latches E, and released and set by the engagement of the pins P with the latches E, and the clock T, operated by the revolution of the barrel L, as and for the purpose set forth.

7. In an information tablet or indicator, the combination of the vertical revolving barrel L, having the adjustable pins P, adapted to engage with the latches E, the revolving slats B, revolved or turned by the levers C, moved by the rod R and weights *c*, and held by the latches E and pins F and released by the pins P, and the clock T, operated by the barrel L, as and for the purpose set forth.

8. The barrel L, provided with the horizontal grooves G, having the opening *g*, in combination with the pins P, having the base *p* and nut *p'*, as and for the purpose set forth.

Signed at Tarrytown, in the county of Westchester and State of New York, this 20th day of July, A. D. 1889.

JAMES B. BARNET.

Witnesses:

JAMES M. REQUA,

ISAAC REQUA.