

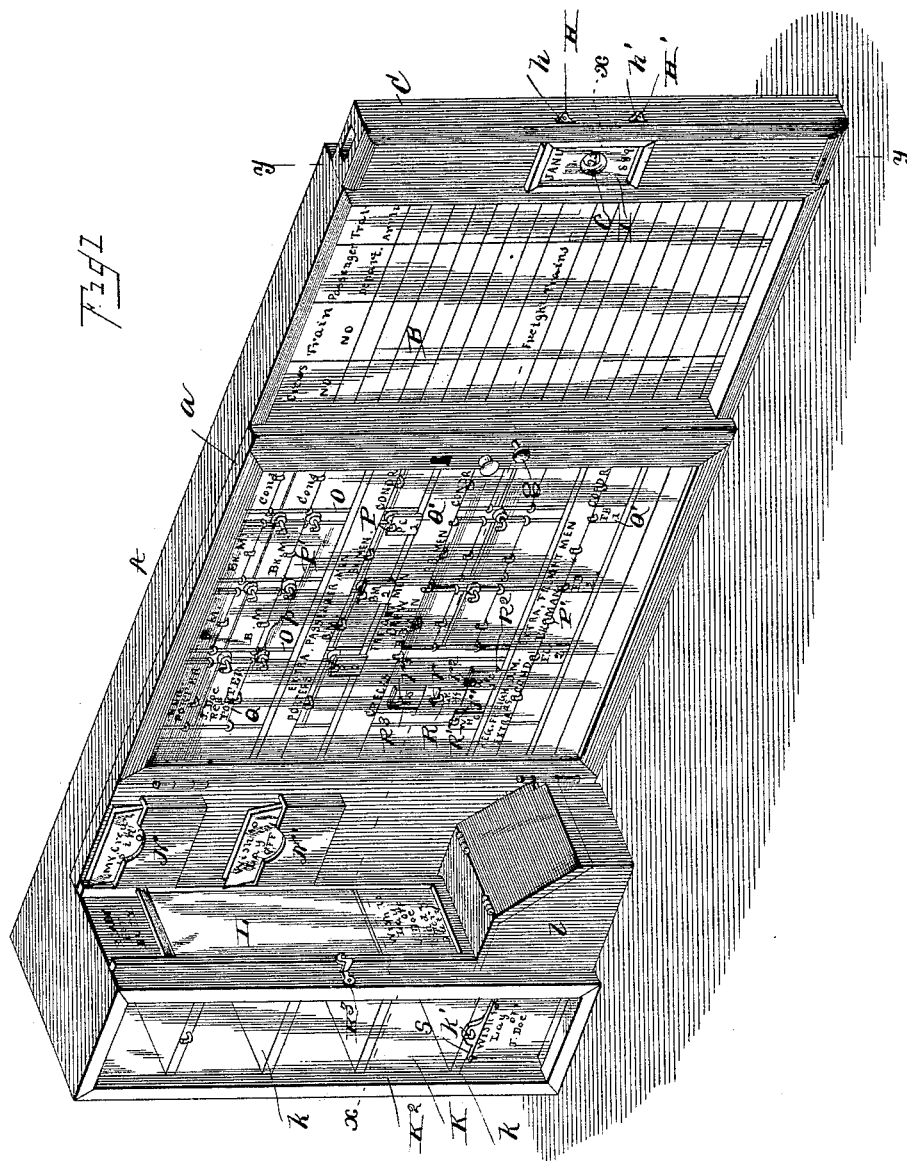
(No Model.)

3 Sheets—Sheet 1.

F. C. COWDEN.
TRAIN BOARD.

No. 419,185.

Patented Jan. 14, 1890.



Witnesses

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C. W. Wyle,

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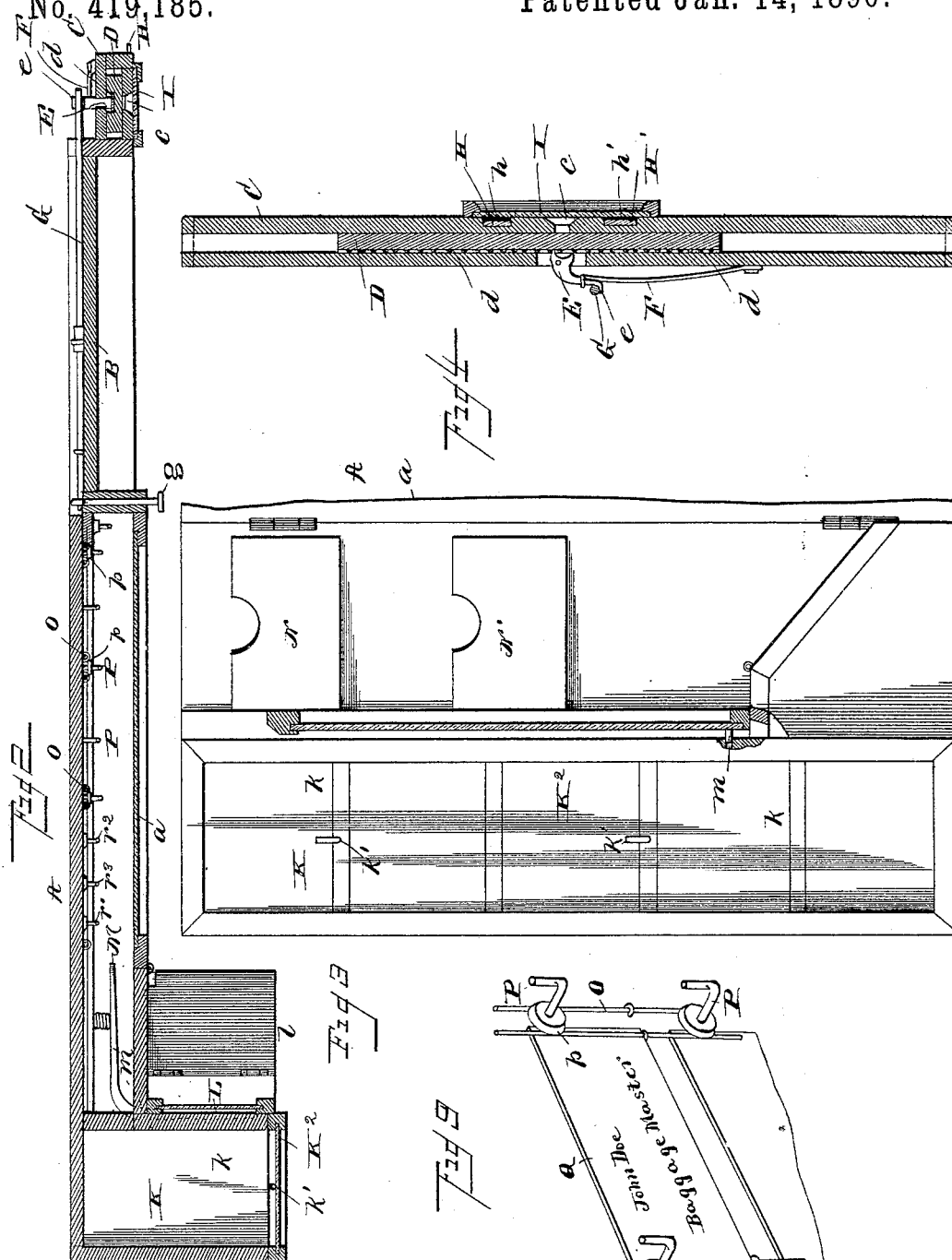
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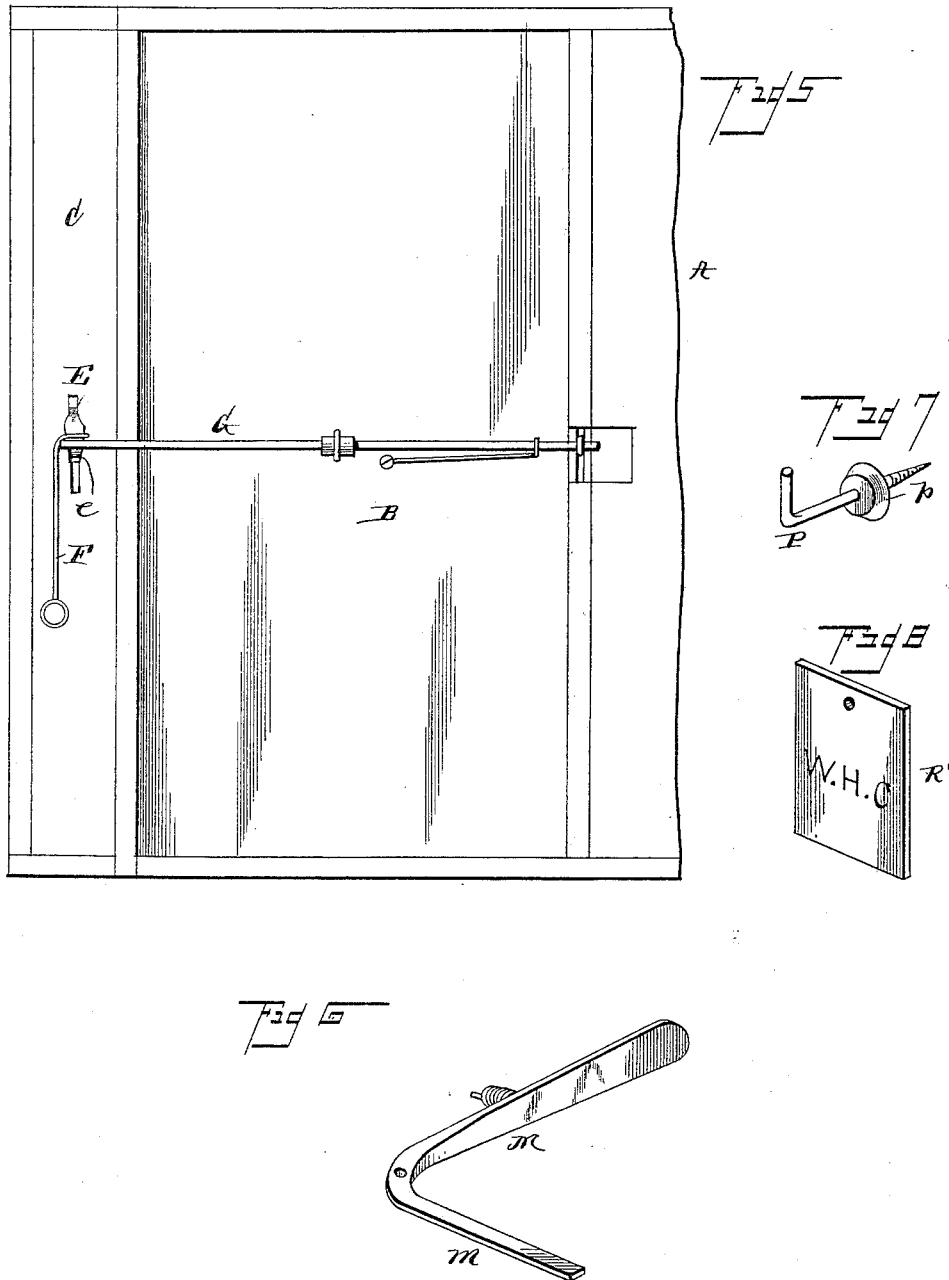
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UNITED STATES PATENT OFFICE.

FORBES C. COWDEN, OF PARSONS, KANSAS.

TRAIN-BOARD.

SPECIFICATION forming part of Letters Patent No. 419,185, dated January 14, 1890.

Application filed February 28, 1889. Serial No. 301,483. (No model.)

To all whom it may concern:

Be it known that I, FORBES C. COWDEN, a citizen of the United States, residing at Parsons, in the county of Labette and State of Kansas, have invented a new and useful Improvement in Train-Boards, of which the following is a specification.

The invention relates to a train-board designed to furnish a complete record of the train-crews and the time for each day, with the numbers of the crews and the numbers of the trains; also, to indicate the extra or substitute men and the men which they are substituting, and also to indicate what men are absent and the reason for the absence, whereby the train-dispatcher may see at a glance what men are available, what men are on duty, &c.

The invention consists in the construction and novel combination and arrangements of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a train-board embodying the invention. Fig. 2 is a horizontal sectional view on the line *xx* of Fig. 1. Fig. 3 is a partial front view showing the pocket or chute in vertical section. Fig. 4 is a vertical sectional view on the line *yy* of Fig. 1 through the calendar. Fig. 5 is a rear view of a portion of the board to show the means for operating the calendar. Fig. 6 is a detail view to show the stop mechanism for the pocket or chute. Fig. 7 is a detail view of one of the hooks. Fig. 8 is a similar view of one of the movable checks. Fig. 9 is a detail perspective view illustrating the fitting of the wires, hooks, and name-cards.

Referring to the drawings, A designates a cabinet provided with a glass door *a*, provided with suitable lock, which is intended to be controlled by the dispatcher or other official having charge of this branch of the work.

B B designate a blackboard at the right of the cabinet, which is suitably inscribed to indicate the crew-number, the train-number, and the times for departing and arriving. To the right of the blackboard is arranged a vertical tube C, in which is fitted a vertically-movable strip D, inscribed with thirty-one num-

bers to indicate the days of the month, the said numbers being visible through an aperture *c* in the front of the tube. This strip is provided on its rear side with a vertical series of notches *d d* or their equivalents, (as ratchet-teeth,) corresponding in number to the numbers on the front of the strip, and E designates a pawl which is pivoted in rear of the tube and projects into the same to engage the said notches successively. This pawl is provided with a depending operating-arm *e*, which is engaged by the free end of a spring F, which normally holds the free end of the said operating-arm pressed rearwardly, and thereby holds the inner end of the pawl in engagement with the notches *d*. A lever G is pivoted to the rear side of the blackboard and bears at one end against the operating-arm of the pawl, whereby when the opposite end of the said lever is pressed rearwardly the operating-arm *e* is pressed forwardly, thereby releasing the date-strip D and allowing it to drop, so that the next number above is exposed. The free end of the lever G is connected to the pressure-knob *g*, which is located close to the free edge of the door of the cabinet, whereby, by depressing the knob, the date is changed.

Transverse grooves *h h'* are formed in the face of the tube C, under a suitable transparent panel I, and in these grooves are arranged removable strips H and H', bearing the names of the months and years, respectively. These strips are changed from time to time by removing the one near the panel and placing it in rear of the others.

K designates a mail-case, which is arranged at the left of the cabinet, which contains a series of shelves *k k*, having hooks *k' k'* on their front edges, and is provided with a transparent door *k²*, having a hook *k³* or other simple securing device. On the right side of the mail-case is arranged a vertical pocket or chute L, having a transparent outer or front side, and it communicates at its lower end with a receiving-box *l*. This pocket or chute is designed to receive the leave-cards (which have been issued to train-hands desiring to be absent from duty) when the men to whom they have been issued have returned to duty, thereby indicating to the proper official that the said men are available. The cards are in-

serted by the men to whom they are granted at the top of the pocket or chute with their inscribed faces outward, so as to be visible through the transparent side of the pocket or chute, and the cards pass down until their lower edges rest on a small slide or stop *m*. This slide or stop is connected to a spring-actuated lever *M* within the cabinet, and when this lever is operated against the strength of its spring the slide or stop is withdrawn and the cards drop into the box, from whence they may be transferred to a suitable file or receptacle, in order to preserve a record of the absence and the time when the men left and returned to duty. Small pockets or card-holders *N N'* are arranged on the front of the cabinet adjacent to the pocket or chute to contain leave and return cards, &c.

The interior of the cabinet is provided with a series of parallel vertical wires *O O*, under which the edges of cards containing the names of the train-hands are engaged, and these wires are held in place by the shoulders *p p* on the hooks *P P*, which are arranged, respectively, at the right-hand end of each name-card. The cards containing the names of the hands are thus arranged in vertical columns, over which are respectively arranged the names of the different grades of the hands, as conductors, brakemen, baggage-masters, porters, &c. Further, the name-cards are also arranged in horizontal series, each of which contains three or four names, and each of the said horizontal series constitutes a crew and is designated by a number at the right. This number therefore stands for the entire crew, and is used in the timetable which is placed on the blackboard on the right.

In addition to the regular train-crews, as above, the names of the extra or substitute hands are arranged in the cabinet, (in the manner above described in referring to the regular hands,) and each extra or substitute hand is given a number, which is indicated on a check *Q*, which is engaged under the wires *O* at the right of the name to which it belongs. An additional movable check *Q'* is hung on the hook *P* belonging to the said name, and this latter check also indicates by suitable letters or abbreviations the grade of the man. The object of these movable checks is as follows: When one of the hands on the regular crews is off duty for any reason, and it is desired to designate one of the extra or substitute hands to take his place, the movable check belonging to one of the extra or substitute hands is hung on the hook at the right of the regular hand's name. Therefore when the "call-boy" goes to the board to see what hands to call for a particular train he notifies the extra or substitute hand instead of the regular hand. When the extra or substitute man next in grade to the absentee, as above, is "laying off," one of the cards *R*, marked "Laying off," is hung on the hook *P'*, which is directly over

the said extra or substitute man's name, and then the next man in rank must be designated (by the means above described) to take the regular hand's place; or the first extra or substitute hand may be out with his own crew, in which case one of the checks *R'*, marked "W. H. C.," which means "with his crew," is hung over his name, and the next man in rank is designated, as above; or it may be that the first extra or substitute hand is already out with a passenger-crew belonging to a regular hand, in which case one of the checks *R²*, marked "W. P. C.," and meaning "with passenger-crew," is hung over his name, and the next man in rank is designated, as shown. When a regular hand is suspended for any reason, one of the checks *R³*, marked "Suspended," and indicating the date of the suspension and the number of days which he is to be off, is hung on the hook *P*, which is arranged above the said regular hand's name. These checks *R R' R² R³* are respectively hung on hooks *r r' r² r³*, which are arranged at a suitable place within the cabinet. When a regular hand desires to "lay off," he takes a blank from the pocket or card-holder *N*, properly fills it out with his request for a leave of absence, places it in a card-clip *S*, and presents it to the official in charge. If the request is granted, the blank is properly signed and hung on one of the hooks *k k'*, which are arranged on the front edge of the shelves *k* within the mail-case, and the movable check of a substitute is moved from its hook to the hook of the regular hand who has been granted leave. When the "regular" returns and wishes to report for duty, he removes the leave-card from the mail-case, fills it out to show when he returns, and drops it into the pocket or chute *L* with its face outward. This card slides down until stopped by the stop mechanism at the bottom of the chute, where it is held with its face exposed until the proper official opens the cabinet, allows the card to drop into the box at the bottom of the chute, and removes the movable check of the extra or substitute hand back to its proper hook.

This system of recording the presence, absence, duty, occupation, and rank of the various members of a force may be used in connection with railroads, (either steam or street-car,) police forces, large mercantile or shipping houses, &c.

Having thus described the invention, I claim—

1. A train-board having the names of the men comprising the various crews arranged in series and numbered and provided with a blackboard at one end on which the crews are designated by their numbers, and the mail-case at the opposite end provided with a series of shelves and having a transparent door, substantially as specified.

2. A train-board having an intermediate cabinet provided with a transparent door and containing the names of the members of the train-crews arranged in series and numbered,

the blackboard at the right of the said cabinet, the mail-box at the left, and the chute arranged upon the side of the mail-case, provided with a glass face, substantially as and for the purpose specified.

3. A train-board having an intermediate cabinet provided with a transparent door and containing the names of the crews, the blackboard at one end of the cabinet, the mail-case at the other end, the transparent-sided chute L, arranged upon the side of the mail-case and communicating at its lower end with a receiving-box *l*, and the slide or stop closing the lower end of the said chute and connected to a lever within the cabinet, substantially as specified.

4. A train-board having a cabinet, the vertical parallel wires O O, the shouldered hooks P P, arranged at intervals, the shoulders of the said hooks bearing on the wires to hold them in position, and the name cards arranged, respectively, adjacent to the said hooks and engaged at their edges under the wires, substantially as specified.

5. The train-board having a cabinet containing the names of the train-crews, the vertical tube at the right of the cabinet, the strip D, arranged in the tube and provided with a series of notches, the spring-actuated pawl engaging the said notches, and the operating-lever connected to the pawl and provided at its free end with a pressure-knob *g*, which is arranged adjacent to the said cab-

inet, substantially as and for the purpose specified.

6. The combination, with a train-board having a vertical tube C, provided with an aperture *c*, and transverse grooves *h h'* above and below the said aperture, of the strip D, fitting in the tube and provided on its front side with numbers which are visible through the aperture *c*, the spring-actuated pawl engaging notches in the rear side of the strip, the operating-lever connected to the pawl and provided with a pressure-knob *g'*, and the removable strips H H', fitting in the grooves *h h'*, respectively, substantially as and for the purpose specified.

7. A train-board having a cabinet, the vertical parallel wires, the checks bearing the names of the regular crews and being secured in place by said wires, the hooks provided with shoulders bearing against the wires and holding the checks in place, and the movable duplicate checks bearing the names of substitutes adapted to be hung in the hooks adjacent to the names of the crew, substantially as described.

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

FORBES C. COWDEN.

Witnesses:

G. M. LINDSEY,
A. H. BAKER.