

No. 775,348.

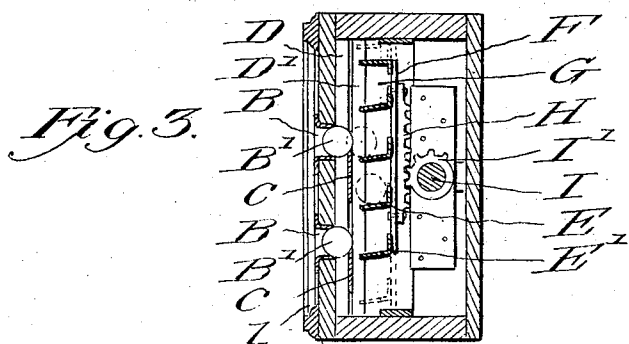
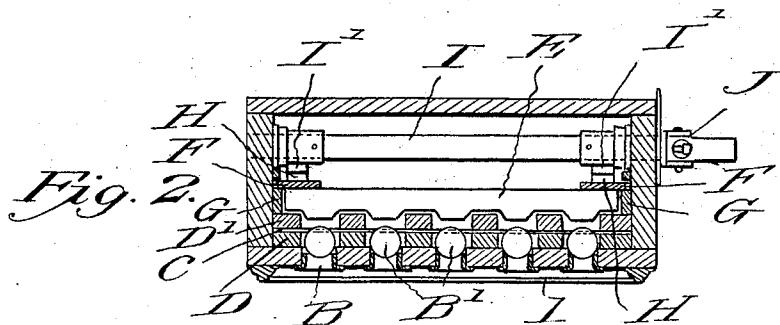
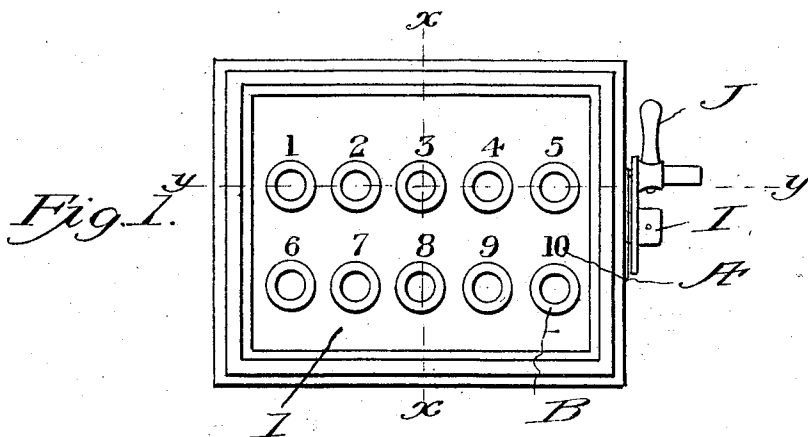
PATENTED NOV. 22, 1904.

T. DOW.

MACHINE FOR KEEPING THE TIME OF EMPLOYEES.

APPLICATION FILED OCT. 31, 1903.

NO MODEL.



Witnesses

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THOMAS DOW, OF PERTH, SCOTLAND.

MACHINE FOR KEEPING THE TIME OF EMPLOYEES.

SPECIFICATION forming part of Letters Patent No. 775,348, dated November 22, 1904.

Application filed October 31, 1903. Serial No. 179,420. (No model.)

To all whom it may concern:

Be it known that I, THOMAS DOW, a subject of the King of Great Britain, residing at Rose Cottage, Dunkeld Road, Perth, Scotland, have
5 invented a new and useful Machine for the Purpose of Keeping the Time of Employees in Factories and other Employments, of which the following is a specification.

This invention relates to machines for keeping
10 ing the time of employees in factories, &c., and has for its object the use of balls to indicate arrival in place of the more common use of checks, tickets, &c., and provides a machine that is simple in construction and operation,
15 as will be more fully illustrated in the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a front elevation of the machine.
Fig. 2 is a horizontal section on the line *x x*
20 of Fig. 1, and Fig. 3 is a vertical section on the line *y y* of Fig. 1.

Like characters of reference denote corresponding parts in the several views.

This invention consists of a box, preferably
25 rectangular, having on its face 1 numbers A, arranged in parallel rows. Under each number is cut a circular opening B. To the rear of the front 1, between the apertures or openings, are secured vertical coinciding strips
30 of wood or metal D D', the distance of the spaces therebetween being greater than the diameter of the openings B. Interposed between the strips D D' and extending across the box is a plate C, which has its upper edge
35 slightly above the plane of the base of the openings B, thereby forming compartments in which rest balls B', the diameter of which is slightly larger than the diameter of the openings B, thereby limiting the outward
40 movement of the balls, and it will be understood that the plate C will limit the normal inward movement thereof.

Secured to the sides of the box are vertical guideways G, in which the sides of the bars
45 F are free to ride. Carried by the bars F, one above the other, are shelves E E', angular shaped and slightly inclined to the front. The lower edges of the shelves are notched so as to allow the shelves to ride over the strips D'.
50 These strips D' form or divide the shelves

into compartments, the size of each being such as to prevent a ball placed therein from entering an adjacent compartment. Two of said shelves E E' respectively act in conjunction with each series of apertures or openings. 55

A horizontal shaft I is journaled in the sides of the box near the rear and near each end carries a segmental gear-wheel I', adapted to mesh with a rack H, attached to the vertical bars F for the purpose of giving vertical
60 movement to the bars.

In operation the balls B' are held normally in their compartments by the plate C and are plainly visible through the opening B, and each employee is numbered to correspond with
65 a number on the box. Before starting-time the timekeeper turns the shaft I by means of the key J, and by the connection through the segment and rack the lower shelf E is placed in operative position. Upon arrival the employee exerts sufficient pressure on the ball
70 in the compartment properly numbered to overcome the resistance of the plate C, which places the ball of the shelf E. At starting-time the shelf E' is lowered to operative position, and it will be clearly apparent to the timekeeper that the compartments having the ball on said shelf E' were late arrivals and should be treated accordingly. It would also
80 be clearly apparent that these balls undisturbed indicate the absentees. When it is desired to replace the balls into their compartments, it is only necessary to slightly raise the shelves, and owing to the inclination thereof the balls will roll by gravity into position. 85

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In combination, a box having apertures in one of its faces, compartments formed with-
90 in the box communicating with the apertures, balls within the apertures, guideways on the sides of the box, bars riding in the guideways, shelves secured to the bars and communicating with the apertures, a rack on the bars, a
95 shaft at the rear of the box, and gear-wheels on the shafts meshing with the rack on the bars.

2. In a device of the character described, a box having apertures, a plurality of shelves 100

alternately communicating with the apertures, balls normally held within the apertures, one for each aperture but capable of being moved onto the shelves, and means for moving the shelves so as to communicate alternately with said apertures.

3. In a device of the character described, a box having apertures, strips secured between the apertures to form compartments for the respective apertures, a plurality of shelves communicating with the respective compartments, balls normally within the compartments, one for each compartment, but capable of being moved onto the shelves so as to communicate alternately with said compartments.

4. In a device of the character described, a box having apertures, strips secured between the apertures to form compartments, a plurality of shelves alternately communicating with the respective compartments, balls normally within the compartments, one for each compartment, but capable of being moved onto the shelves, means carried by the strips to hold the balls in their normal position, and means for moving the shelves so as to communicate alternately with the said compartments.

5. In a device of the character described, a box having apertures, strips secured between the apertures to form compartments, a plurality of shelves alternately communicating with the respective compartments, balls normally within the compartments, one for each compartment, but capable of being moved onto the shelves, plates carried by the strips, said plates holding the balls in their normal position and means for moving the shelves so as to communicate alternately with said compartments.

6. In a device of the character described, a box having apertures, strips secured between the apertures, plates held by the strips, the upper edge of the plates being slightly above the plane of the base of the apertures and forming compartments, a plurality of shelves alternately communicating with the compartments, balls normally within the compartments, one in each compartment, but capable of being moved onto the shelves and means for moving the shelves so as to communicate alternately with said compartments.

7. In combination, a box having apertures, a plurality of shelves alternately communicating with said apertures, balls normally within the apertures, one for each aperture but capable of being moved onto the shelves, guideways for the shelves, and means for moving the shelves so as to communicate alternately with said apertures.

8. In a device of the character described, a box having apertures, strips secured between the apertures to form compartments and shelves adapted to alternately communicate with the compartments, each of said shelves having an edge notched to receive an edge of the strips.

9. In a device of the character described, a box having apertures, a plurality of inclined shelves alternately communicating with the apertures, balls normally held within the apertures, one for each aperture but capable of being moved onto the shelves, and means for moving the shelves so as to communicate alternately with said apertures.

10. In a device of the character described, a box having apertures, a plurality of shelves arranged one above the other alternately communicating with the apertures, balls normally held within the apertures, one for each compartment but capable of being moved onto the shelves, and means for moving the shelves so as to communicate alternately with apertures.

11. In a device of the character described, a box having a plurality of shelves alternately communicating with said apertures balls normally held within the apertures, one for each aperture but capable of being moved onto the shelves, said shelves being so arranged as to receive the balls and to form the apertures when in one position and to return the balls to the apertures when in a different position and means for moving the shelves so as to communicate alternately with the apertures.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 29th day of July, 1903.

THOS. DOW.

Witnesses:

JOHN RITCHIE,
JOHN MCKILLIP.