(No Model.) 2 Sheets—Sheet 1.

F. P. BOYLE, J. H. DUNDON & J. E. BOYLE.

FARE REGISTER.

No. 491,007. Patented Jan. 31, 1893.

Fig. 2.

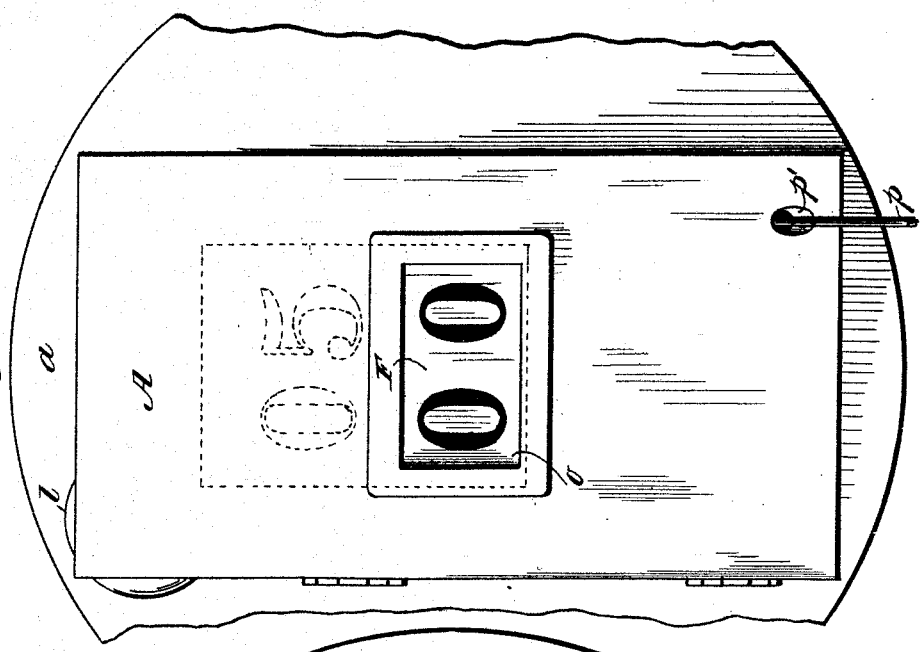
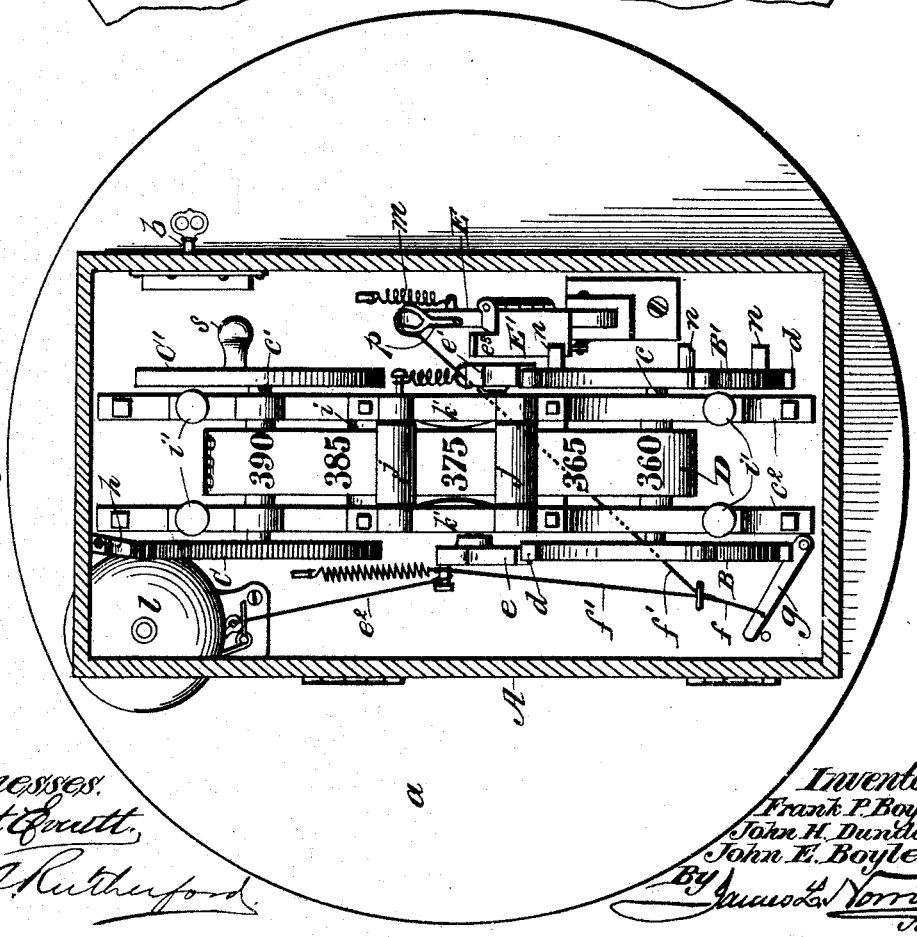


Fig. 1.



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(No Model.) 2 Sheets—Sheet 2.

F. P. BOYLE, J. H. DUNDON & J. E. BOYLE.

FARE REGISTER.

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Fig. 5.

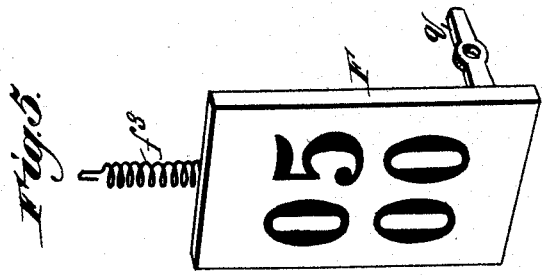
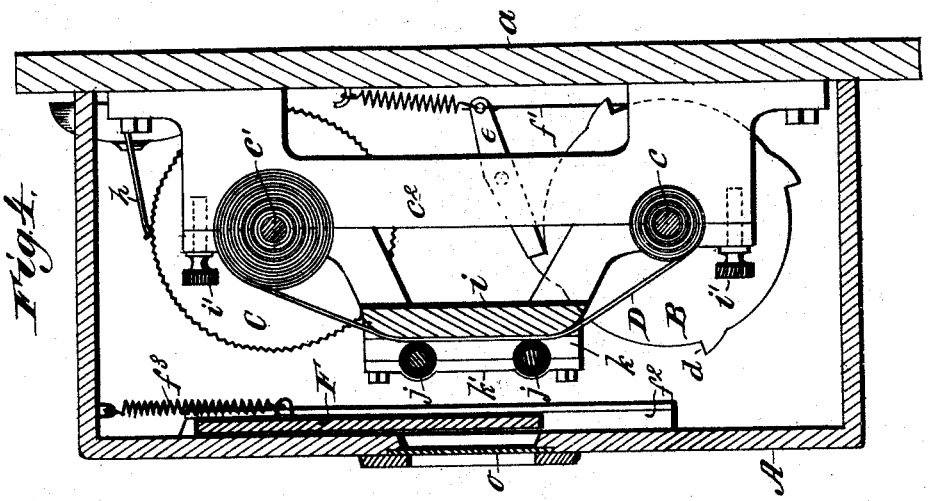
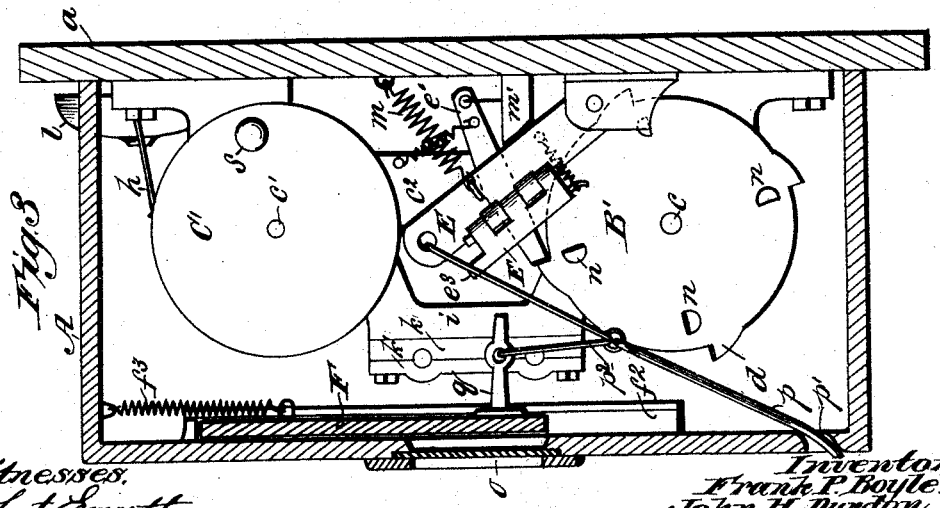


Fig. 4.



Figs.



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UNITED STATES PATENT OFFICE.

FRANK. P. BOYLE, JOHN H. DUNDON, AND JOHN E. BOYLE, OF YOUNGSTOWN, OHIO.

FARE-REGISTER.

SPECIFICATION forming part of Letters Patent No. 491,007, dated January 31, 1893.

Application filed May 3, 1892. Serial No. 431,729. (No model.)

To all whom it may concern:

Be it known that we, FRANK. P. BOYLE, JOHN H. DUNDON, and JOHN E. BOYLE, citizens of the United States, residing at Youngstown, in the county of Mahoning and State of Ohio, have invented new and useful Improvements in Fare-Registers, of which the following is a specification.

Our invention relates to an improved register, more especially for registering fares in passenger cars, and yet is equally applicable among other purposes as a cash-register for registering the price of articles in a saloon or other place, and it consists of the novel combination and arrangement of parts substantially as hereinafter more fully disclosed and pointed out in the claims.

In the accompanying drawings—Figure 1 is a front elevation, with the closure or casing in section, of our improved register. Fig. 2 is a broken front elevation, showing more especially the closure or casing front. Fig. 3 is a side elevation of the register with the casing or closure in section. Fig. 4 is a sectional elevation taken through the entire device. Fig. 5 is a detached perspective view of the register slide.

In the embodiment of our invention, we provide a suitable closure or casing A hinged to a base or support *a* upon which is held the operative mechanism, over which closes the casing or closure secured by a suitable lock and key *b*, the latter being in the custody of the cashier or proprietor of the establishment using the register.

B B′ are toothed wheels or disks secured to a common axle or shaft *c* and C C′ are additional opposite disks or wheels secured to a common axle or shaft *c′* both of which axles or shafts are mounted or bear in a suitable bearing c^2, suitably fastened or screwed to the base or support *a*. The wheels or disks B B′ are provided with predetermined spaced apart coincident teeth *d* adapted for engagement with spring-held retaining pawls *e e′* suitably pivoted in position upon the bearing c^2 and connected by branch wires or lines *f′ f′* to a single line or wire *f* connected to a hand lever *g*, by the actuation of which said pawls may both be simultaneously disengaged from the engaging teeth of said wheels or disks, when desired as for instance in reeling the registering tape upon and from one to the other of the shafts of said wheels or disks. The disk or wheel C has a serrated or roughened periphery and engaging therewith a spring-pawl *h* suitably secured to the base *a* to serve as a kind of brake, to prevent a reactory movement of the wheels or disks.

D is the registering tape having suitably imprinted thereon the required figures or numbers in the present instance adapted to serve as a fare register, although it may be marked to indicate the price of meals &c. in a saloon or sales in a business establishment according to its intended use. This tape has its greater portion wound say first upon the upper shaft *c′* and thence extends to the other shaft *c* and intermediate of the shafts the tape passes over a bridge *i* preferably secured upon the bearing c^2 by milled screws *i′ i′* to permit the ready removal, bodily, of said shafts with their wheels and disks, and the tape with said bridge, wholly, from the other part of the register, when it may be desired to exchange the same for other like arrangement of parts, or for other purpose, as renewal of the parts, &c. The tape D is passed preferably under elastic or rubber covered rolls *j j* supported in side-bearing pieces *k*, secured to said bridge, and corresponding pieces or bars *k′* held upon the pieces *k*, said rolls being so spaced apart as to permit the ready reading of the figures or numbers on said tape. The pawl *e* has connection, by a wire or line e^2, with a suitable gong *l* or other form of signal to give notice of the registration of a fare or other amount, according to its use of the register.

E is a spring retracted dog suitably pivoted upon the base *a* and normally resting, under the retracting action of its spring *m*, connected thereto and to said base, against an incline-ended post or stop *m′* also secured to the base. This dog has pivoted or hinged to it upon its front edge a spring-held, or yielding, wing or plate E′, having a salient portion or extension e^3 at its upper left hand corner to engage any one of a series of lateral, bevel ended, plain-faced, projections *n* on the side of the wheel B′, arranged co-incidently with the peripheral teeth *d* of said wheel. Each

engagement of the wing or plate E′ with the projections *n*, therefore, will revolve the wheel B′ with its shaft through an arc equal to that between any two of the teeth *d* of the wheel, effecting the movement of the tape D sufficiently to bring the succeeding number or figure thereon over the bridge *i* between the rolls *j j*, as required in keeping an account of the registration at the preferably glass-covered viewing opening *o* in the front of the casing or closure, where each single amount to be registered, is indicated by mechanism described. The dog E has connected to it a line or cord *p*, passed through an opening *p′*, in the lower front edge of the closure or casing A and leading to a suitable support and dangling at a convenient point for grasping or manipulation. This line or cord may also have connection by a branch cord p^2 with the register-slide, presently described for moving the latter thereby if desired.

F is the register-slide or board supported over the viewing opening *o* in the front of the casing or closure A and between cleats or guide-strips f^2 secured to the inner side of said front, said slide or board being upheld by a retractile spring f^3 connected thereto and to said closure or casing. This board or slide has suitably applied to its outer side, for exposure through the viewing opening *o* in the closure or casing front the number or data of a single fare or amount, for registration as above intimated. The board or slide F has secured to its lower edge an arm *q* projecting inwardly therefrom, to which the branch-cord p^2 of the line *p* above referred to may be connected for the purpose aforesaid. This spring-retracted slide F is moved downward each time the cord or line *p* is pulled by the operator thus exposing to view the single fare amount to be registered synchronously with the movement of the tape and consequently the total or aggregate amount of the registration to date. Whenever the main cord *p* is pulled to swing the dog E, the branch cord p^2 moves the slide F, but while we have illustrated this branch cord connection between the main cord and the arm *q*, for moving the slide, we do not confine ourselves thereto, for obviously the end of the dog E may be utilized to act on the arm *q* for moving the slide when the main cord is pulled to swing the dog.

Below the number or figure on the slide or board for registration are arranged naughts which are exposed for view through the opening *o* when the register is not in use thus avoiding unnecessary exposure of the amount for registration and yet calling attention to the fact of the presence of a register.

By grasping a handle *s* on one of the wheels or disks C C′ and turning to the right the tape can be unreeled when desired from the lower shaft to permit the re-use of the tape.

The tape is shown as marked for registering, at a single operation, five cents, but it may be marked to register three cents, ten cents, or twenty-five cents, and the device may be used as a cash register as before intimated to register the amounts of sales.

Having described our invention, what we claim, is:—

1. In a register, the combination with a casing having an aperture and a spring retracted slide having certain data thereon and arranged to permit the exposure of said data through the aperture in the casing, and an arm projecting from the slide, of a spring retracted dog having a hinged or pivoted wing or cam, a series of wheels or disks, one having lateral projections adapted to be engaged by said wing, a tape bearing certain figures or numbers and connected to the shafts of said wheels, and means for actuating said dog, substantially as described.

2. The combination with a casing having an aperture, of pairs of wheels mounted on suitable shafts and one of said wheels having lateral projections coincident with peripheral teeth thereupon, a tape bearing numbers or figures and connected with the shafts of the wheels, spring pressed pawls for preventing retrograde movement of the wheels, a bridge having separated rolls under which the tape passes, a spring retracted dog having a pivoted spring retracted wing or plate, a spring retracted slide having a projecting arm and bearing numbers or figures adapted to be viewed through the aperture in the casing, and a line for actuating the dog, substantially as described.

In testimony whereof we have hereunto set our hands and affixed our seals in presence of two subscribing witnesses.

FRANK. P. BOYLE. [L. S.]
JOHN H. DUNDON. [L. S.]
JOHN E. BOYLE. [L. S.]

Witnesses:
J. EDGAR RUDGE,
PATRICK MCMANMON.