F. J. & W. H. HOYT.

Register.

No. 167,901. Patented Sept. 21, 1875.

Fig: 1.

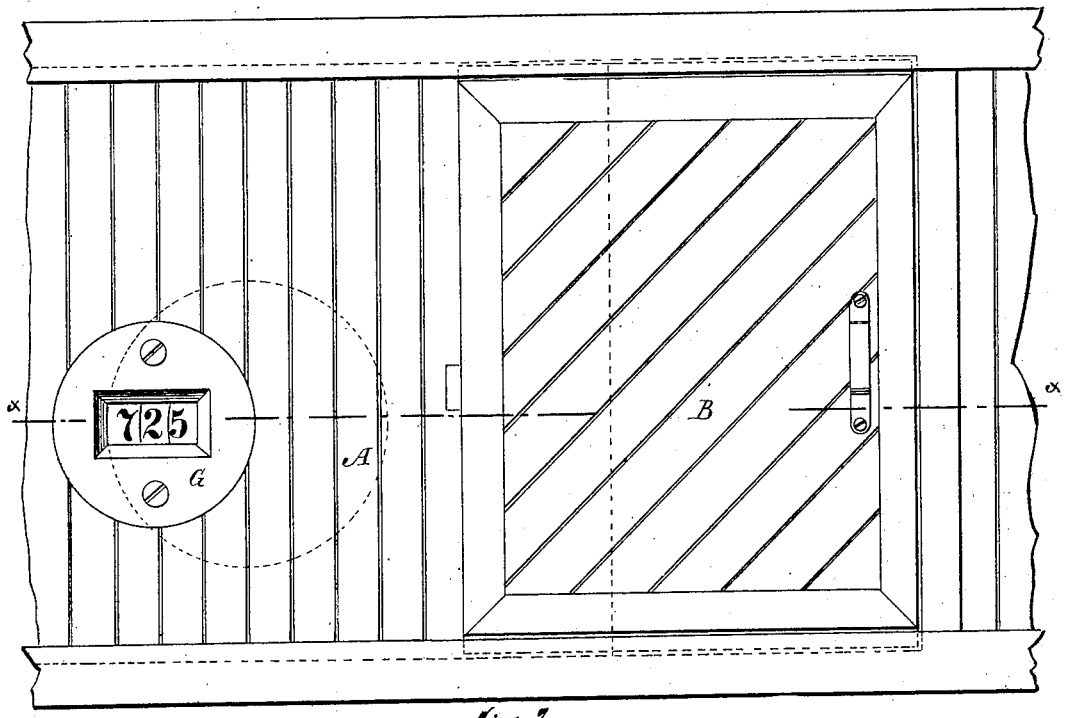


Fig: 2.

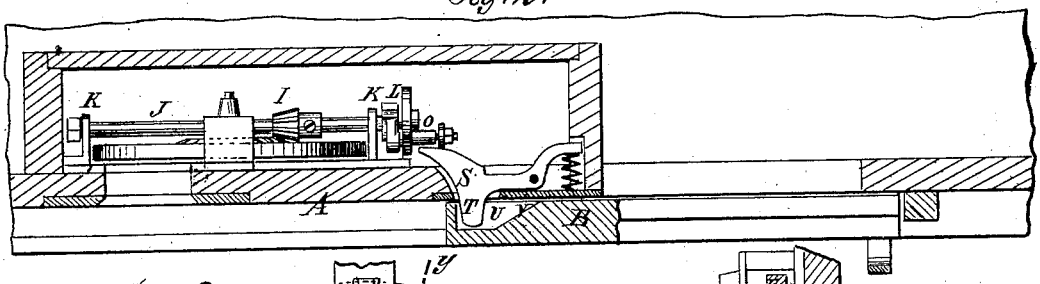


Fig: 3

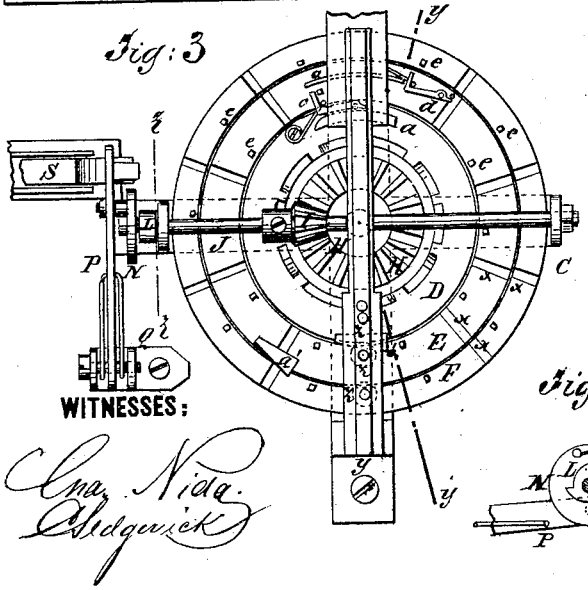


Fig: 4.

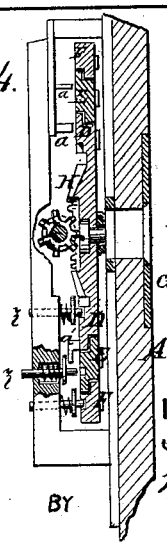
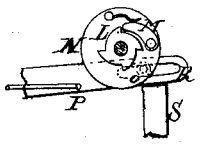


Fig: 5.



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FREDERIC J. HOYT AND WILLIAM H. HOYT, OF BATAVIA, NEW YORK.

IMPROVEMENT IN REGISTERS.

Specification forming part of Letters Patent No. **167,901**, dated September 21, 1875; application filed March 13, 1875.

To all whom it may concern:

Be it known that we, FREDERIC J. HOYT and WILLIAM H. HOYT, of Batavia, in the county of Genesee and State of New York, have invented a new and useful Improvement in Freight-Car Commutation-Seal, of which the following is a specification:

The object of the present invention is to furnish a seal for the protection of freight-cars on railroads, to prevent them from being tampered with; and it consists of a seal formed by a combination of numbers, (or letters,) which numbers may be changed without destroying the seal. It also consists in bolts, dog, ratchet-wheel, and shaft, with the necessary changeable ring-disks and apparatus, in combination therewith.

In the accompanying drawing, Figure 1 represents the side of a freight-car, showing the sliding door and seal. Fig. 2 is a horizontal section, taken on the line *x x* of Fig. 1. Fig. 3 is a face view of the mechanism for changing the seal, showing the ring-disks in their proper position. Fig. 4 is a section of Fig. 3, taken on the line *y y*. Fig. 5 is a cross-section of Fig. 3, taken on the line *z z*.

Similar letters of reference indicate corresponding parts.

A represents the side of the car. B is the sliding door. C is the mechanism placed on the inside of the car, by means of which the seal is made. D, E, and F are the three rings forming (together) a disk, upon the back or opposite side of which are figures or letters which are seen through a glass, G, in an opening on the outside of the car when the sliding door B is closed. These figures are changed, and a different number is shown whenever the door is opened. The nine digits and the 0 (zero) is placed on each ring, and the rings are revolved by means of a bevel-wheel, H, attached to the inner ring D, and by the pinion I on the shaft J. This shaft extends across the face of the entire disk, and revolves on journals in the stands K K. On the end of this shaft is a ratchet, L. M is a spring-pawl, which engages with the ratchet. N is a disk on the shaft in which is a wrist-pin, O. P is a spring-lever attached by a pin to the stand Q, which lever has a slot, R, to receive the wrist-pin O. S is a dog fixed to the car side, having a projection, T, which the sliding door strikes. The projection T rests in the cavity U in the door, and when the door is opened it slips up on the inclined plane V, and forces the dog against the lever P, which gives the shaft and pinion I a revolving motion, which moves one or more of the disk-rings, and changes the number of the seal. This rotating movement is applied directly to the inner wheel D, which carries units, and makes ten revolutions before the ring E is moved, and the ring E makes ten revolutions before the ring F is moved. The ring E carries tens, and the ring F hundreds. By adding one or more rings to the disk the numbers may be increased to any desired extent. *x* designates grooves or channels in the three rings. Y is a bar which extends across the disk attached at the ends to the side of the car. *z* represents pins which pass through this bar, which enter the grooves or channels *x*. These pins are raised by the wedges *a'* attached to the rings, which allows the rings to revolve. These pins *z* are attached to spiral springs, which springs force them into the grooves after they have been raised, and holds the rings stationary.

Power to revolve the two outer rings is imparted by means of the little detent-hooks *c* and *d*. When the ring D has made ten revolutions the hook *c* engages with one of the ten pins *e* of the ring E, and gives that ring one-tenth of a revolution, and when the wheel E has made ten full revolutions the hook *d* engages with one of the pins *e* in the ring F, and that ring is carried one-tenth of a revolution. These motions of the rings are controlled by the pin *z*, which divide the rings into ten parts, and drop down when the rings have revolved the proper distance, and stops the movement. One of these movements are made at each opening of the car-door, which changes the number of the seal.

The number of the seal may indicate the number of the railroad-station, so that if the door has been clandestinely opened it is readily detected.

Many inventions, consisting of seal-locks and other devices, have been introduced for the

protection of freight-cars, but such devices invariably have a seal which is broken whenever the car-door is opened.

By our invention the seal is kept intact, and the car may pass all the stations on the road and be opened at any of them, and the seal will tell if the car has been clandestinely opened.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. The combination of registering or commutation seal-disks, with a car and sliding door thereof, and connecting mechanism, substantially as described, adapted to be operated for turning the disks and changing the seal number or character whenever said door is moved, as and for the purpose set forth.

2. The rings D, E, and F, wheel H, pinion I, and shaft J, combined for the purposes described.

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WILLIAM H. HOYT.

Witnesses:
ALVIN J. FOX,
ROBERT S. LEWIS.