F. VITALI & G. PIZZORNO.

SLIDING DOOR LOCK.

APPLICATION FILED AUG. 28, 1913.

1,167,032.

Patented Jan. 4, 1916.

2 SHEETS—SHEET 1.

Fig 1

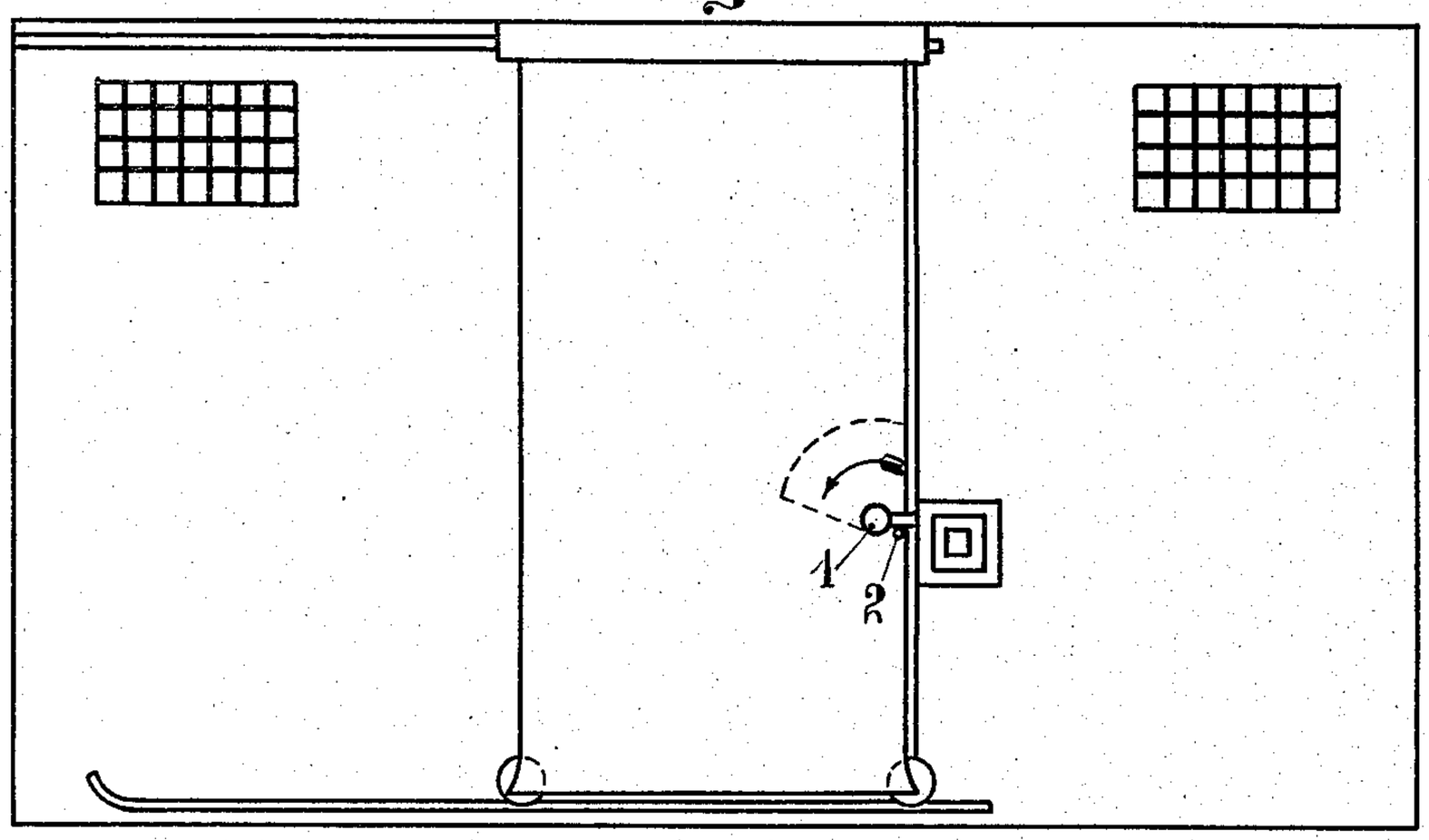

Fig 4

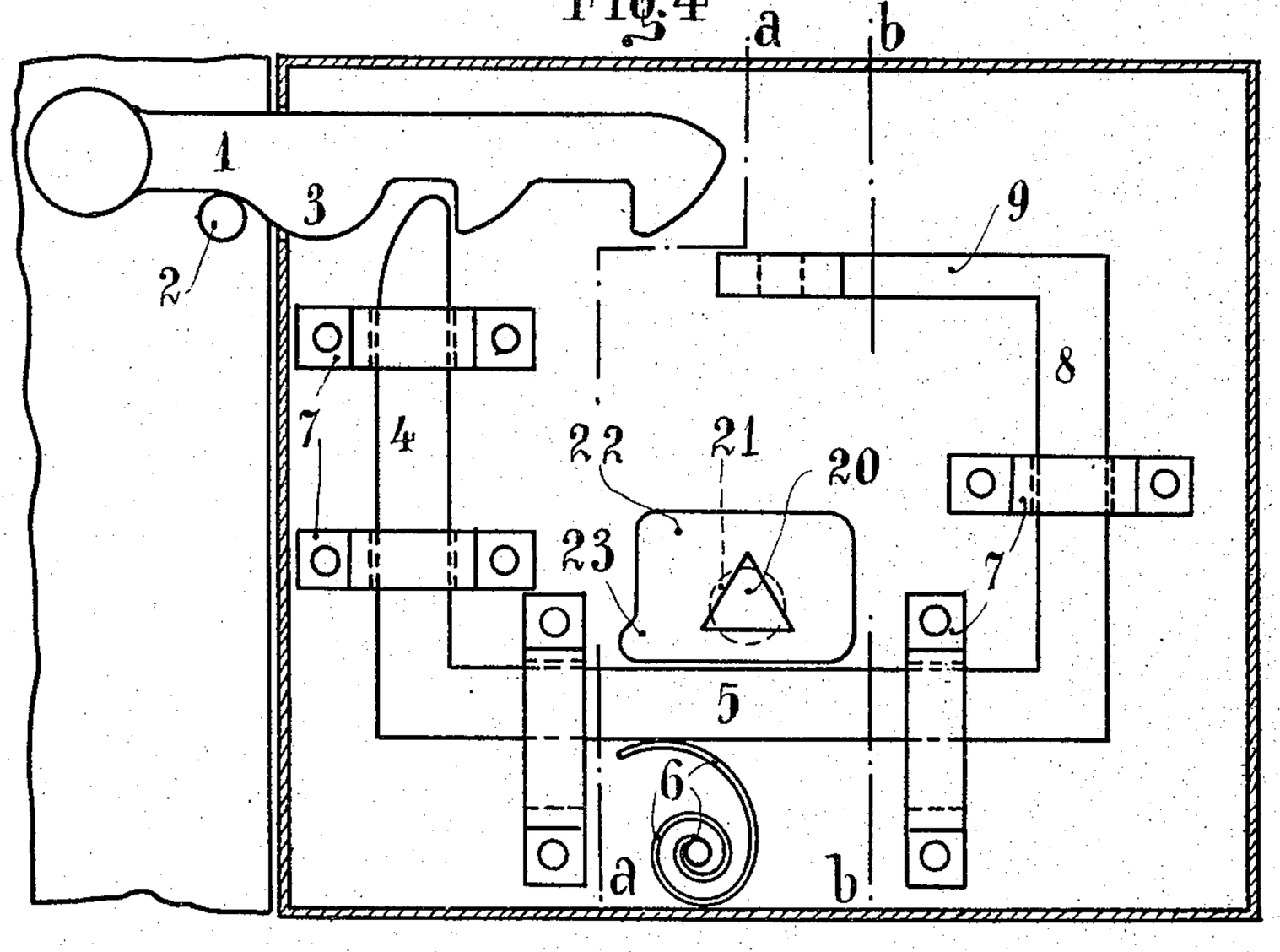

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Fig. 2

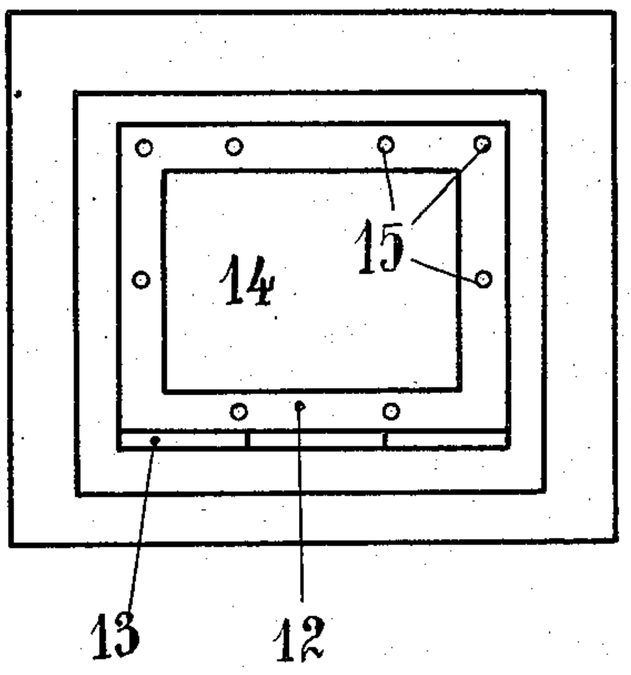


Fig. 3

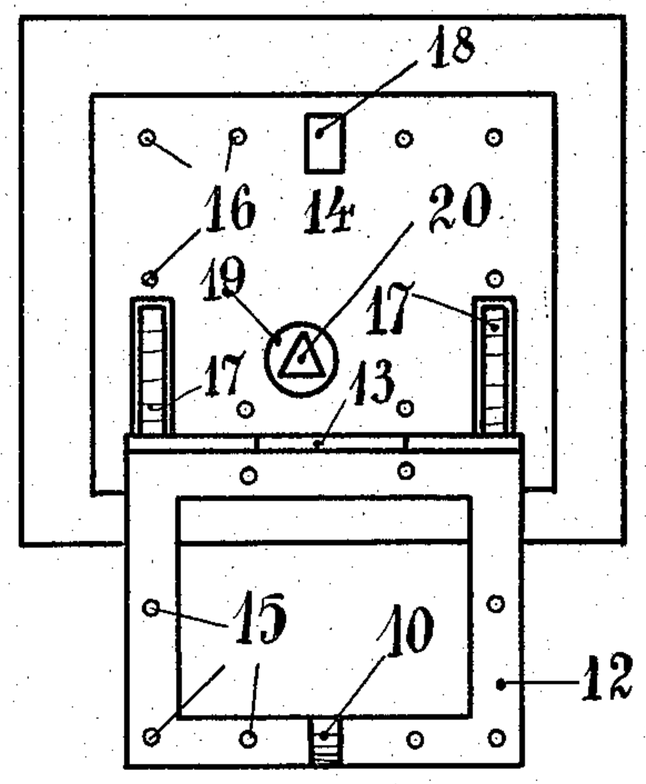


Fig. 5

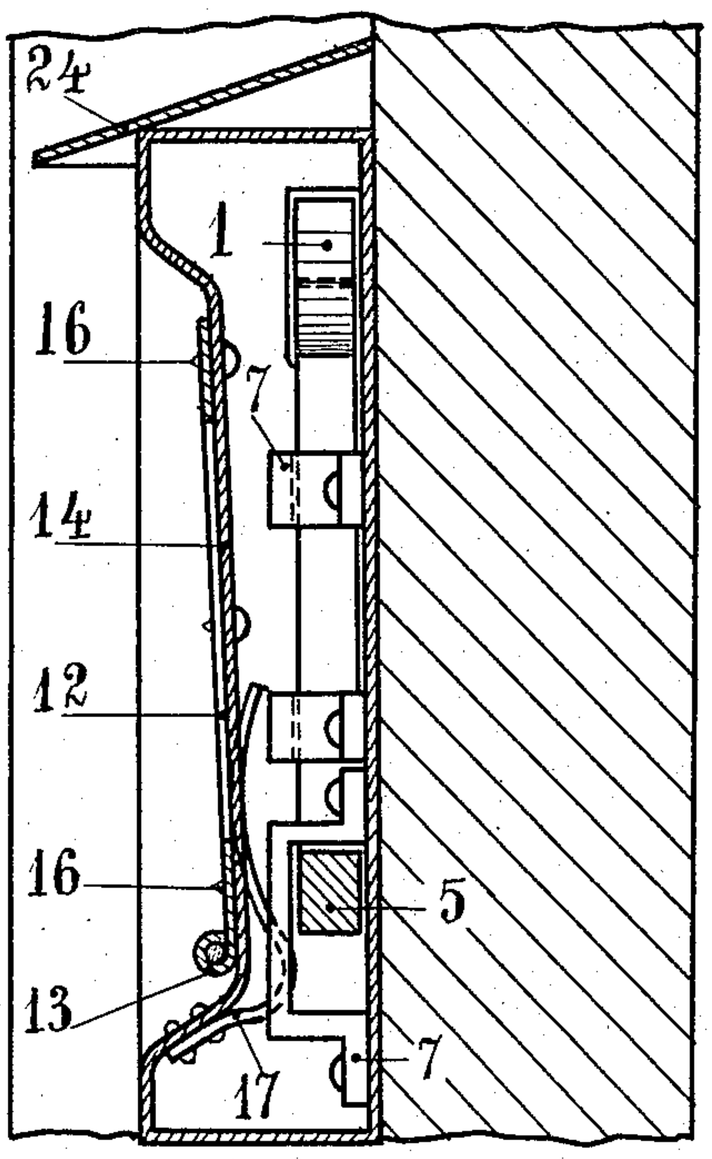
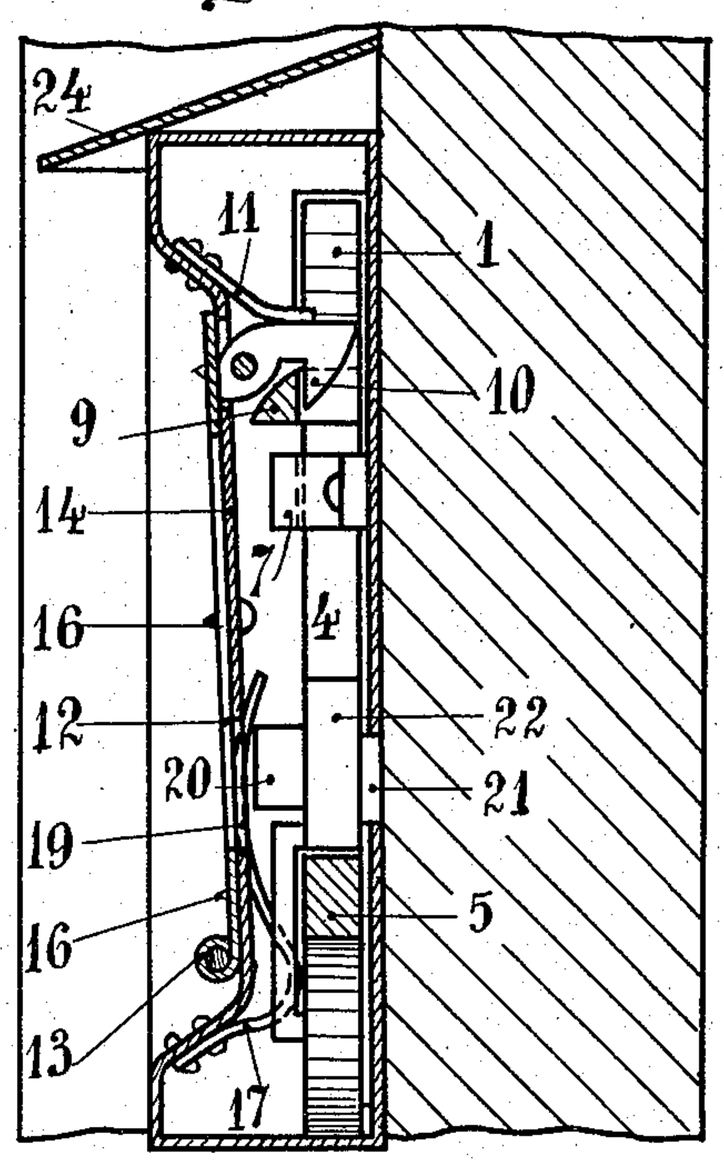


Fig. 6



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UNITED STATES PATENT OFFICE.

FRANCESCO VITALI AND GIOVANNI PIZZORNO, OF OLGIATE OLONA, ITALY.

SLIDING-DOOR LOCK.

1,167,032. Specification of Letters Patent. Patented Jan. 4, 1916.

Application filed August 28, 1913. Serial No. 787,068.

To all whom it may concern:

Be it known that we, FRANCESCO VITALI and GIOVANNI PIZZORNO, both subjects of the King of Italy, residing at Olgiate Olona, Province of Milan, in the Kingdom of Italy, have invented certain new and useful Improvements in Sliding-Door Locks, of which the following is a specification.

The present invention relates to a combined locking and sealing device for the doors of railway cars and the like which will afford increased security and provide visible means whereby any illicit use thereof can be readily detected.

The invention is illustrated in the accompanying drawing wherein—

Figure 1 is a side elevation of a car with its sliding door provided with the safety device embodying the present invention. Fig. 2 is a front view of the lock in the closed position with its front cover also closed after the sealing. Fig. 3 is a front view of the lock in the open position and ready to have its key hole sealed. Fig. 4 is a front elevation of the lock with the cover, the front plate and a portion of the door removed in order to show the internal structure of the device. Figs. 5 and 6 are transverse vertical sections on lines *a*—*a* and *b*—*b* of Fig. 4, respectively.

The door of the car is of the ordinary construction so that the present invention can be readily adapted to any kind of car actually in use. The latch or hasp 1 which is hinged so as to leave the door opening entirely free, is prevented from descending forward below the horizontal, by the stop 2 provided on the door. The latch is provided with two teeth and a swelling or projection 3.

When shutting the door, the latch 1 enters the lock provided on the car and is engaged by means of its first tooth when it is desired to leave the door slightly open but the second or inner tooth is engaged when it is desired to completely close the door; the swelling 3 preventing in either case, the release of the latch by forcing an implement through the opening formed in the side of the lock and lifting or disengaging the latch, said opening having to be sufficiently deep for the ingress and egress of the latch teeth or projections.

Within the lock, the latch 1 engages, the head or end of the arm 4 of the frame or tumbler 5 which is pressed upward by means of a spring 6, this frame being guided in stirrups 7. The other arm 8 of the frame 5 is formed with a horizontal extension 9 suitably adjusted to engage the small latch 10 controlled by the spring 11, said latch being connected to the cover 12 of the lock. The latter has the shape of a frame, mounted by hinges 13 upon the front plate 14 of the lock, and this frame is formed with holes 15 engaged by pins 16 provided on the plate 14 and longer than the thickness of the frame of the cover. It is obvious that these pins may be provided on the latter and penetrate holes formed in the said plate. The cover is under the influence of springs 17 which are fixed on the lower part of the inner face of the plate 14 and act upon the said cover through little openings formed in the said plate. This plate 14 is bent inwardly in order to increase its rigidity and to shield it against inclement weather. It is formed with two apertures, the upper one 18 for the small latch 10 of the cover 12 and the central one 19 for the key which engages the spindle 20 pivoted at 21 upon the rear plate of the lock. Every station on the line will naturally have a key corresponding to this spindle. The latter is integral with follower 22 having a nose 23 acting on the frame for the purpose of releasing the latch.

The operation of the device is as follows:—For closing: By pushing the sliding door to the right (Fig. 1) the first or the second tooth of the latch 1 will engage the end of the arm 4 of the frame 5 compressing the spring 6 which rises immediately the latch is locked (Fig. 4). Upon the front plate 14 of the lock the aforementioned cover is applied, which is of an appropriate kind of paper or the like having a suitable thickness, the names of the starting stations and termini, date and other useful indications being previously printed thereon. This cover which is held by the pins 16 of the plate 14, hides the hole 19 for the key and, if the necessary aperture has not been formed, also hides the hole 18 of plate 14 for the small latch 10 of the cover 12, said latch 10 forming the necessary aperture and thus retains the said cover. Finally the cover the holes 15 of which engage the pins 16, is closed and prevents the opening of the cover because the small latch 10 of the

cover, engaging the extension 9 of the frame 5 will also prevent the opening of the cover itself.

What we claim and desire to secure by Letters Patent of the United States is:—

A seal lock for cars comprising the combination of a latch on the door, with a lock including a spring controlled frame positively guided within a casing and having two suitably shaped free ends which engage the latch of the door and the latch of a hinged cover, respectively, a cam adapted to move the frame, means for operating said cam, a key hole in said casing, pins on said casing to receive a keyhole cover and penetrating holes in the cover substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

FRANCESCO VITALI.
GIOVANNI PIZZORNO

Witnesses:
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