May 12, 1925. 1,537,874

F. PETROSKY

LOCK

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Fig. 2.

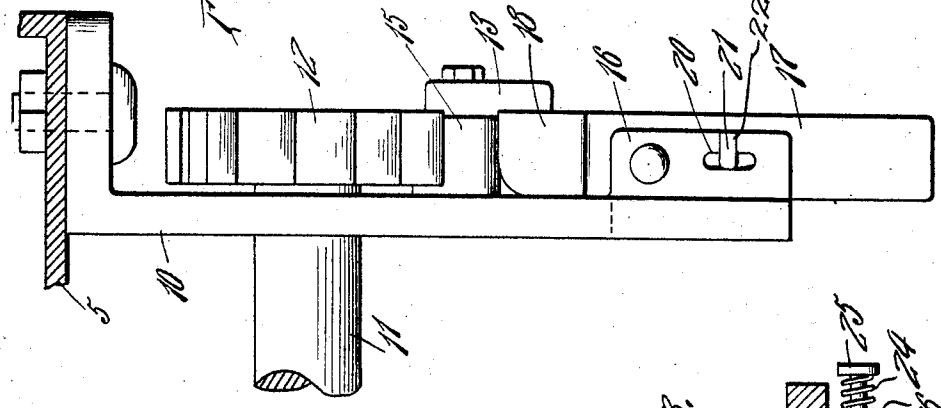
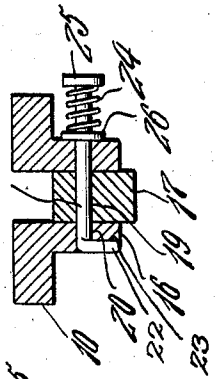


Fig. 3.



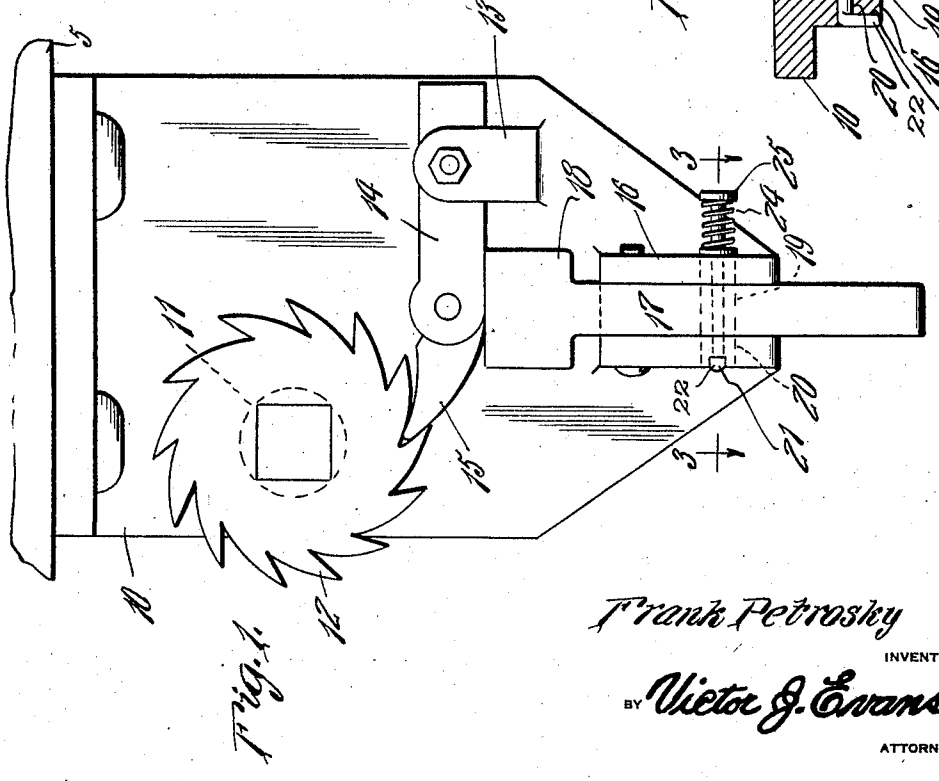


Fig. 1.

Frank Petrosky

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ATTORNEY

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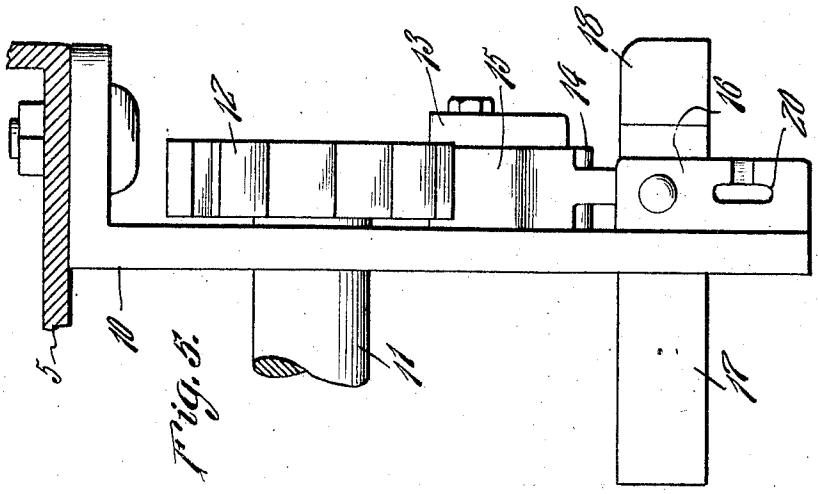

Fig. 5.

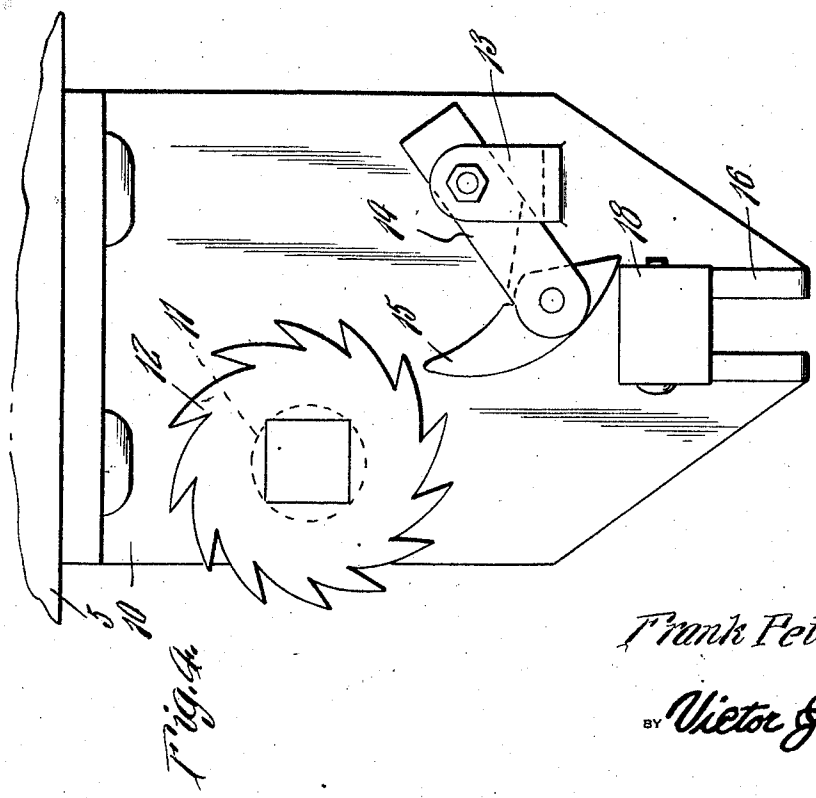

Fig. 6.

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Patented May 12, 1925. 1,537,874

UNITED STATES PATENT OFFICE.

FRANK PETROSKY, OF REPUBLIC, PENNSYLVANIA.

LOCK.

Application filed November 12, 1924. Serial No. 749,488.

To all whom it may concern:

Be it known that I, FRANK PETROSKY, a citizen of the United States, residing at Republic, in the county of Fayette and State of Pennsylvania, have invented new and useful Improvements in Locks, of which the following is a specification.

My invention relates to transportation cars having swinging bottom section doors and its principal object is to provide an operating means which will positively be locked so that the doors cannot swing downwardly when the cars are struck incident to coupling the same together.

A further object of the invention is to provide a locking mechanism for the door operating means of a hopper car which includes a pawl and ratchet which are held in locked engagement by a pivoted latch element.

With the preceding and other objects and advantages in mind, the invention consists in the novel combination of elements, construction and arrangement of parts and operations to be hereinafter specifically referred to, claimed and illustrated in the accompanying drawings, wherein:

Figure 1 is a side elevation of the invention.

Figure 2 is an elevation taken at right angles to Figure 1, parts being shown in section.

Figure 3 is a transverse sectional view taken on line 3—3 of Figure 1.

Figure 4 is a view similar to Figure 1 showing the latch in inoperative position.

Figure 5 is a view showing the latch in inoperative position, and is a similar view to Figure 2.

Referring to the drawings in detail wherein corresponding characters of reference denote corresponding parts throughout the several views, the numeral 5 designates part of a hopper car to one side of which an angle bracket 10 is secured, which extends downwardly from the car bottom as shown. Journaled in this angle bracket 10 is the usual shaft 11 for operating the pivoted or swinging doors, not shown, of the hopper car and carries at one end a ratchet wheel 12. Cast with the angle bracket 10 at a point below the ratchet wheel 12 is an ear 13 which is offset from the angle bracket and pivoted between this ear and the bracket is a locking element 14 to the other end of which a dog 15 is pivoted, the latter being engageable with the ratchet wheel 12, as shown. Also cast with the bracket 10 adjacent its lower end is a pair of parallel ears 16 between which a latch element 17 is pivoted, the latter being formed with a head which is engageable beneath the outer end of the locking element 14 at the point of pivotal connection between the locking element with the dog 15. With the head 18 engaged beneath the locking element 14 and dog 15 as shown in Figure 1, the parts 15 and 14 are held against accidental movement and consequently the ratchet wheel 12 is held against accidental rotation.

In order to lock the latch element 17 in operative position, the latter is provided with a transverse opening 19 which meshes with similar openings 20 in the ears 16 and received in these openings 19 and 20 is a locking pin 21 having a right angularly extending lug 22 formed upon one end which is engageable in a notch 23 in one of the ears 16. As shown in Figure 5, one of the openings 20 is enlarged so that the head 22 may be moved transversely through the same to permit the pin to be withdrawn when desired. A coil spring 24 encircles the outer end of the pin 22 and bears against the head 25 formed on this pin and a washer 26 carried also by the pin.

With the parts shown in Figure 1, the dog 15 is held with the member 14 against pivotal movement and thereby holds the ratchet wheel 12 against rotation.

When it is desired to release the element 15 to permit the ratchet wheel 12 to be rotated, the pin 21 is rotated to dispose the lug parallel to the longitudinal axis of the large recess 20 and is then retracted from the locking element 17. The latter is then swung to a right-angular position between the ears 16 as shown in Figure 5.

While I have shown and described the preferred embodiment of the invention, it should be understood that changes in the form, construction and arrangement of parts may be made without departing from the spirit of the invention or the scope of the subjoined claims.

What is claimed is:

1. A lock mechanism for ratchet wheels including a pivoted element adapted to be swung to a horizontal position and engaged with the ratchet wheel, a pivoted locking element arranged below the pivoted element and adapted to engage the latter and hold

the same against movement, and a pin insertible through the pivoted locking element to hold the same against movement.

2. The combination with a shaft provided with a ratchet wheel, a member pivotally mounted adjacent the ratchet wheel, a pawl pivoted to the pivoted member, a latch element pivotally mounted below the pivoted member and provided with a head adapted to underlie the pivoted member and the pawl for holding the same against pivotal movement, and means to hold the pivoted latch member against movement.

3. The combination with a shaft and ratchet wheel carried thereby, a pawl pivotally mounted adjacent the ratchet wheel and adapted to be engaged with the latter, a pivoted locking element supported adjacent the pawl and movable at right angles thereto, a head carried thereby and engageable beneath the pawl to hold the same against movement, and a pin engageable with the locking element to hold the same against pivotal movement, such pin being adapted to be disengaged from the locking element to permit the same to be swung to a position to permit the pawl to swing away from the ratchet wheel.

4. A lock for ratchet wheels comprising a plate, an ear carried by the plate and spaced therefrom, a pivoted member arranged between the ear and plate, a pawl pivoted to the pivoted member and adapted to engage the teeth of a ratchet wheel, a pair of ears also formed on the plate, a locking member pivoted between the ears, a head carried thereby and engageable below the pivoted member and pawl, the locking member and ears being provided with openings, and a spring pressed pin insertible through the openings to hold the locking member against pivotal movement, the pin being capable of being wholly disengaged from the locking element to permit the same to be swung to a position away from the pawl and pivoted member.

In testimony whereof, I affix my signature.

FRANK PETROSKY.