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2,093,653

BOXCAR DOOR LOCK

Filed Feb. 24, 1936

2 Sheets-Sheet 1.

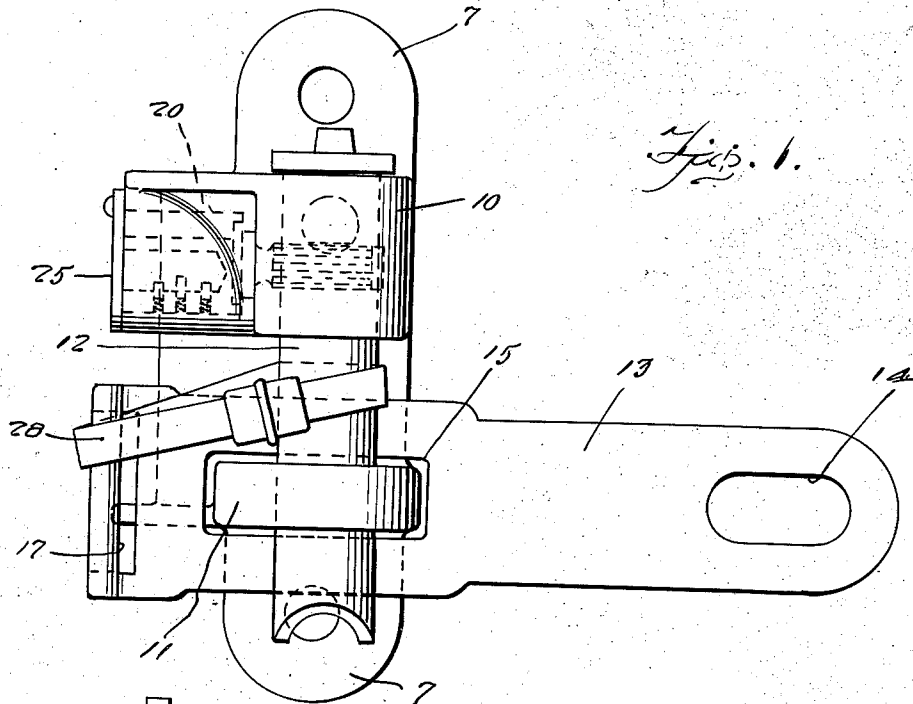


Fig. 1.

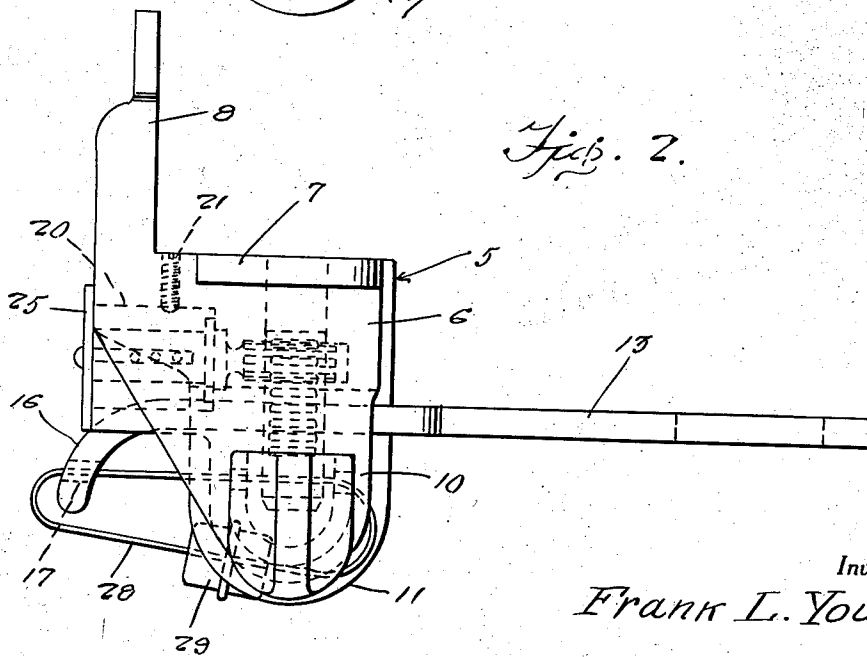


Fig. 2.

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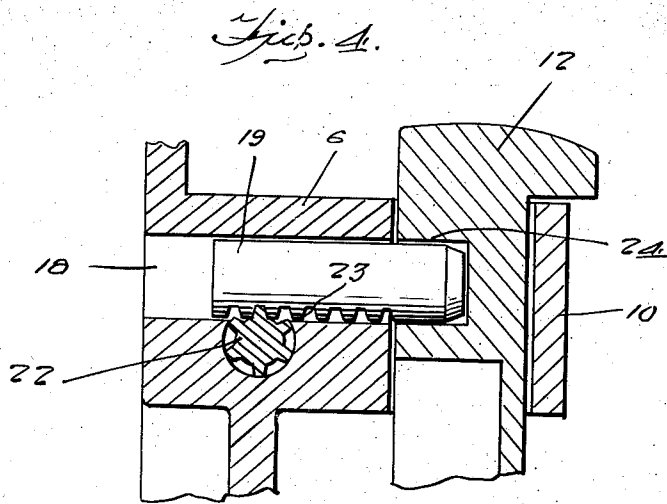
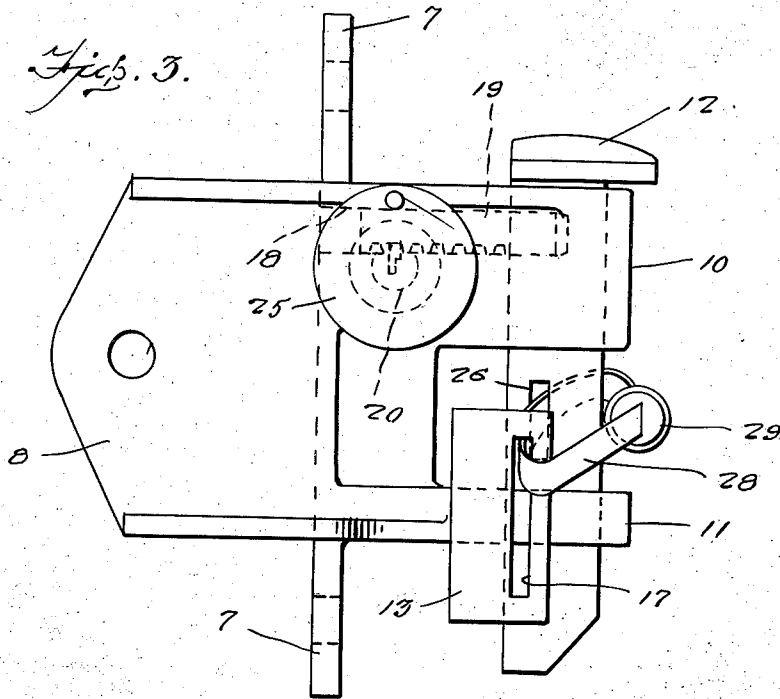
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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

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BOXCAR DOOR LOCK

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3 Claims. (Cl. 70—13)

This invention relates to locks, and the object of the invention is to provide a lock which while the same is capable of universal application, it is particularly adapted for use on box cars for locking and sealing the door thereof for protection against thieves, for the purpose of keeping a record as to the place the car door might have been opened during its movement while loaded, and to determine the approximate location of a car in the event the same is found pilfered, three reasons why seals are generally used in connection with box car door locks.

Further the present invention may be readily applied to the hasp and keeper assembly of the type now generally employed as box car door locks.

Briefly the invention consists in the provision of a door lock of the hasp and keeper type and equipped with key control means for locking the keeper key or pin in place together with means for applying a seal to the keeper pin and the hasp as is now generally done in connection with box car door locks.

The invention together with its objects and advantages will be best understood from a study of the following description taken in connection with the accompanying drawings wherein:

Figure 1 is a front elevational view of a lock embodying the features of the present invention.

Figure 2 is a top plan view thereof.

Figure 3 is a side elevational view of the lock.

Figure 4 is a detail sectional view showing the manner of securing the keeper pin in effective position.

Referring to the drawings by reference numerals it will be seen that 5 indicates generally a somewhat conventional keeper, the same being formed of a casting 6 having upper and lower flanges 7 and a right angularly disposed flange 8 through the medium of which and suitable fastening means the keeper is secured to the door jamb.

The casting 6 has projecting forwardly therefrom upper and lower apertured ears or lugs 10 and 11 respectively to accommodate the keeper pin 12.

The hasp is indicated by the reference numeral 13 and is formed at one end with a slot 14 through the medium of which and a suitable fastening means the hasp 13 is secured to the door of a box car, or a similar closure. Adjacent its free end, as is somewhat conventional, the hasp 13 is provided with a slot 15 that receives the lug or ear 11 in a manner clearly shown; while at its ter-

minal the hasp 13 has a curved portion 16 provided with a slot 17.

In accordance with the present invention the casting 6 in the upper portion thereof is bored as at 18 to receive slidably, a locking bolt 19. At right angles to the bore 18 the casting 16 is bored to accommodate the barrel of a key operated lock 20. The barrel of the lock is secured within the bore through the medium of a set screw or the like 21 as clearly suggested in Figure 2. In accordance with the present invention the rotary barrel of the lock 20 is provided with a pinion 22 that is in mesh with rack teeth 23 provided on one side of the locking bolt 19 as shown in Figure 4. Thus by insertion of a proper key within the rotary barrel and proper manipulation of the key the locking bolt 19 may be projected or retracted as found desirable.

The keeper pin 12 is provided with a keeper socket 24 which, when the pin 12 is in proper position aligns with the bore 18 so as to receive an end of the locking bolt 19 when the same is in projected position to thereby lock the pin 12 in operative position. A pivoted cover plate 25 is provided to protect the key receiving end of the lock as best shown in Figure 3.

Intermediate its ends the keeper pin 12 is provided with a slot 26 through which and the slot 17 is threaded the seal 28 which latter in the present instance is shown in the form of a ribbon or strip of metal the ends of which after application of the seal are positively secured together in any well known manner and as indicated generally at 29.

From the above it will be apparent that in actual practice the hasp 13 is swung into position to have the ear or lug 11 projected therethrough as shown. Key bolt 12 is then passed downwardly through the aperture in the ears or lugs 10 and 11 after which the lock key is inserted in the lock 20 and rotated to transmit through the pinion 22 and teeth 23 sliding movement to the bolt 19 whereby to project the bolt into engagement with the socket 24 of the pin 12 thus securing the pin in locked position. After the locking of the pin 12 in position the seal 28 is applied in a manner hereinbefore stated and also thought to be apparent.

It will be apparent that a lock of the character embodying the features of the present invention will be practically tamperproof, and that even if the lock 20 may be picked the removal of the pin 12 cannot be accomplished without fracturing the seal 28.

It will be further appreciated that I have pro-

vided a lock of the type particularly adapted for use on box car doors which while key controlled will also permit of the use of the seal as is now in general use in connection with box car door locks.

Having thus described the invention, what is claimed as new is:

1. A lock of the character described comprising a keeper adapted to be secured to a door jamb or analogous support and having vertically spaced apertured ears projecting therefrom, and also having a plunger member slidably mounted thereon and adapted to be projected into the aperture of one of said ears and a key controlled lock operatively connected with the plunger for projecting and retracting it; the other of said lugs adapted to project through the slot of a hasp, and a keeper pin adapted to engage in the apertures of said lugs for retaining the hasp engaged with the last named lug, and said keeper pin having a keeper socket adapted to receive the projecting end of the lock plunger whereby the keeper pin is locked in position.

2. In combination with a lock of the type including a keeper having vertically spaced apertured ears, a hasp having a slot through which one of the ears is adapted to project, said hasp being also provided with a slot in one end thereof,

and a keeper pin adapted to extend downwardly through the apertures in the ears, a locking bolt slidably mounted on the keeper and having an end adapted to be projected into the aperture of the uppermost one of said lugs, a key operated lock barrel mounted on said keeper, motion transmitting means operatively connecting the tumbler of the lock with said plunger for transmitting movement to the latter for projecting or retracting the plunger, and said keeper pin being provided with a keeper socket for receiving the projected end of the lock plunger.

3. A lock of the character described having in combination an apertured lug to receive a keeper pin, a keeper pin adapted to be disposed downwardly through the aperture in said lug, a lock plunger slidably mounted on said keeper and having its end adapted to be projected into the aperture of said lug, and said keeper pin having a socket adapted to receive the projected end of the locking plunger whereby said pin is locked in engagement with said lug, and key controlled locking means mounted laterally of said lug and including a key operated cylinder provided with a pinion, and rack teeth on said locking plunger with which said pinion is in mesh for projecting and retracting said plunger.

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