Feb. 21, 1956 A. L. THOMPSON 2,735,709

HATCH COVER LOCK

Filed Nov. 7, 1951

Fig. 1

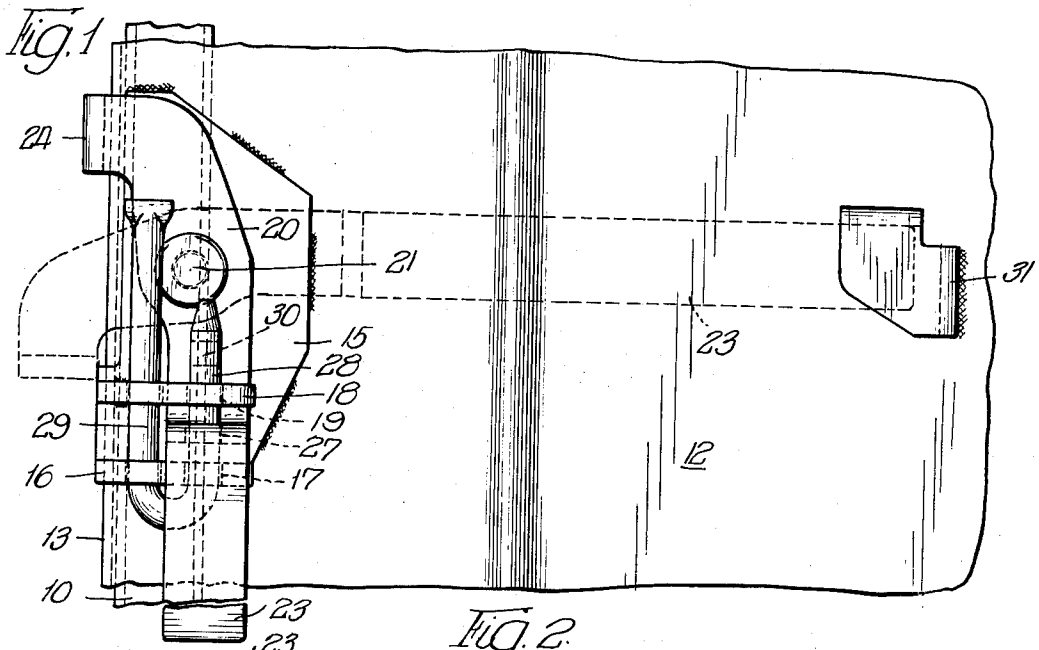


Fig. 2

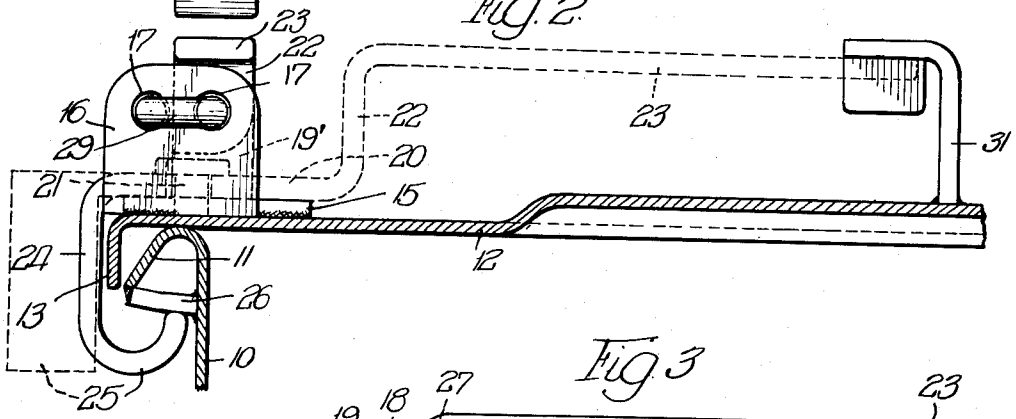
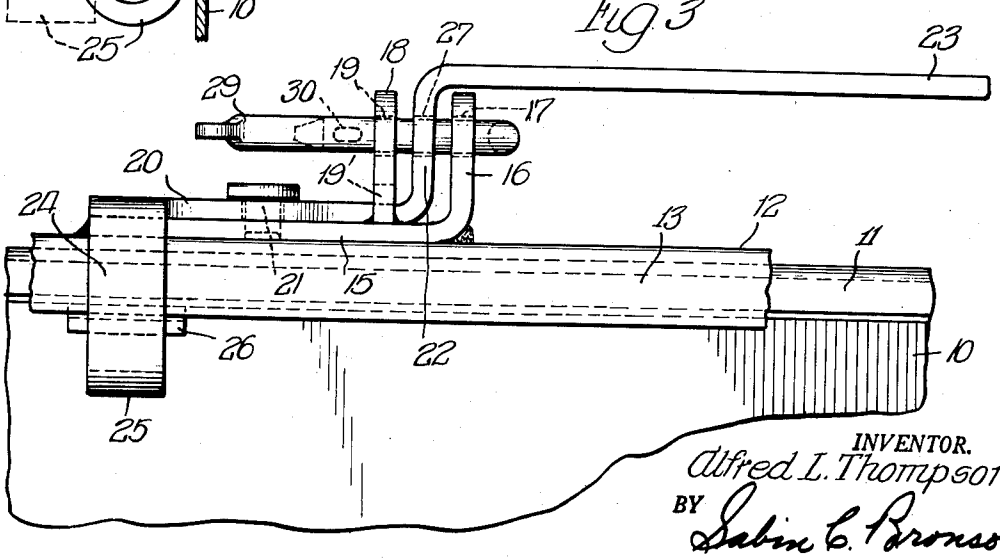


Fig 3



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HATCH COVER LOCK

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5 Claims. (Cl. 292—241)

This invention relates to improvements in locks for railway car hatch covers and is especially designed for use with hatch covers of railway cars of the covered bulk commodity type, but may be used as a lock for covers of other types of containers.

The objects of the invention are to provide a hatch cover lock applicable to and carried by the hatch cover, which moves in a plane parallel to the hatch cover, and which is exceedingly simple in construction and easily applicable to the hatch cover.

Other objects and advantages of the invention will be apparent from the following description thereof.

Referring now to the accompanying drawings forming part of this application, and wherein like reference characters indicate like parts.

Fig. 1 is a top plan view of the improved hatch cover lock showing a portion of the hatch cover to which the lock is applied, and a portion of the hatch frame.

Fig. 2 is a side elevation of the improved lock showing a portion of the hatch frame and cover in section.

Fig. 3 is a front view of Fig. 2.

In the drawings, a portion of the hatch frame is indicated at 10, and in hopper car roofs usually consists of a rectangular box like structure projecting above the plane of the roof and provided with an outwardly and downwardly turned upper margin 11 which extends all around the frame.

A portion of the hatch cover is shown at 12, which portion is the side margin opposite to the side which is hinged to the hatch frame, and which margin is provided with a downturned flange 13 extending to approximately the plane of the lower edge of the downturned margin 11 of the hatch frame. It is to this margin, centrally of the hatch cover, my improved lock is applied.

The lock bracket comprises an irregularly shaped base plate 15 which is welded flatwise to the outer margin of the hatch cover. One end of this base plate 15 is provided with a flange 16, which flange extends normal to the base plate and is provided with a pair of spaced holes 17. Spaced from flange 16 is a second similarly shaped flange 18, likewise having a pair of spaced holes 19 which register with the spaced holes 17. This flange 18 is edge welded to base plate 15 in parallel spaced relation to flange 16, and is undercut, as shown in dotted lines at 19', for approximately one-half its width to provide room for the hereinafter described handle to slide within said undercut when in locked position, as shown in Fig. 1.

The operating handle for the hatch cover is offset and comprises a portion 20 which is pivoted adjacent one end, as at 21, to the base plate 15 so as to swing flatwise against and parallel with said base plate. Portion 20 is of a length so that when in closed position it extends within the undercut portion 19' of the flange 18 and is turned at right angles thereto, as at 22, a distance approximately equal to the height of the flange 16, and is then turned laterally parallel to the portion 15 forming a handhold portion 23, which portion 23 occurs over

the top of flange 16 when in closed position. At the end of the pivoted portion 20, a flange 24 is provided which parallels flange 13 and terminates in a hooked end 25 which extends under the downturned margin 11 of the hatch frame, and the free end of which hooked portion bears against the lower surface of a metal piece 26, welded in slightly inclined position between the hatch frame and lower edge of margin 11, when the operating handle is in closed position.

Thus when the handle is swung on its pivot 21 from the open position, shown in dotted lines in Figs. 1 and 2, to the closed position, shown in full lines in said figures, the free end of the hooked portion 25 will slide on the inclined surface of cam 26, causing the hatch cover to close tightly upon the upper margin of the hatch frame 10.

In this closed position the portion 22 of the handle will occur between the flanges 16 and 18, and said portion 22 is also provided with a single hole 27 which registers with one of the aligned holes 17 and 19 and through which holes 17, 27 and 19 the shorter leg 28 of a U-shaped locking pin may be passed, the other longer leg 29 passing through the other aligned holes 17 and 19 and thereby locking the device in closed position. The said shorter leg is provided with a transverse slot 30 therethrough through which a car seal may be applied to prevent unauthorized opening of the hatch cover.

As an added convenience I have provided a hook member 31 which may be edge welded to the hatch cover in a position so that when the handle is in open position, the free end thereof will move under said hook 31, at which time the portion 23 may be used to raise the hatch cover for access to the hatch without causing any undue strain on the pivot 21.

From the above it is apparent that a very simple and inexpensive hatch cover lock is provided, and with the exception of the metal piece 26, the entire lock is carried by the hatch cover so that it may be assembled with the hatch covers before application to the car.

I claim:

1. A combination handle and locking lever for the cover of a railway car hatch frame consisting of a flat metallic bar offset intermediate its ends so that the end portions occur in spaced parallel planes, one end portion having a hole therethrough for application of means to pivot said bar to a hatch cover, and a flange issuing downwardly from one side of the end of said one end portion terminating in an upwardly facing U-shaped portion for underlapping engagement with a hatch frame.

2. A lock for the cover of a railway car hatch frame, said lock comprising a base plate adapted to be secured to said cover, spaced flanges extending normal to said plate, an offset operating handle pivotally mounted upon said plate so as to swing in a plane parallel to said plate, the offset portion extendable between and parallel to said flanges, said handle having an end engageable with a car part upon movement of said handle in one direction.

3. A lock for the cover of a railway car hatch frame, said lock comprising a base plate, a flange extending upwardly from said plate, an offset operating handle pivotally mounted upon said plate so as to swing in a plane parallel to said plate, the offset portion extending parallel to said flange, said flange and said offset portion having registerable openings adapted to receive a locking pin, said handle having a hooked end underlappingly engageable with a car part upon movement of said handle in one direction.

4. A lock for the cover of a railway car hatch frame, said lock comprising a base plate, a flange extending normal to said base plate, an offset operating handle

mounted upon said cover so as to swing in a plane parallel to said base plate, the offset portion extendable parallel to said flange, said handle having a hooked end engageable with an inclined surface of a car part to force the cover to closed position upon movement of said handle in one direction, and means to secure said offset portion of the handle ot said flange in the closed position of said handle.

5. A lock for the cover of a railway car hatch frame, said lock comprising a bracket including a base plate, spaced flanges issuing from said base plate normal thereto, an offset operating handle pivoted to said bracket to swing in a plane parallel to said base plate, the offset portion extendable between said flanges, said flanges and said offset portion having registerable openings adapted to receive a locking pin, said handle having an end engageable with an inclined surface of a car part to force the cover to closed position upon movement of said handle in one direction.

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