F. THOMANN.

BOLT FOR GRAIN CAR AND OTHER DOORS.

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935,284.

Patented Sept. 28, 1909.

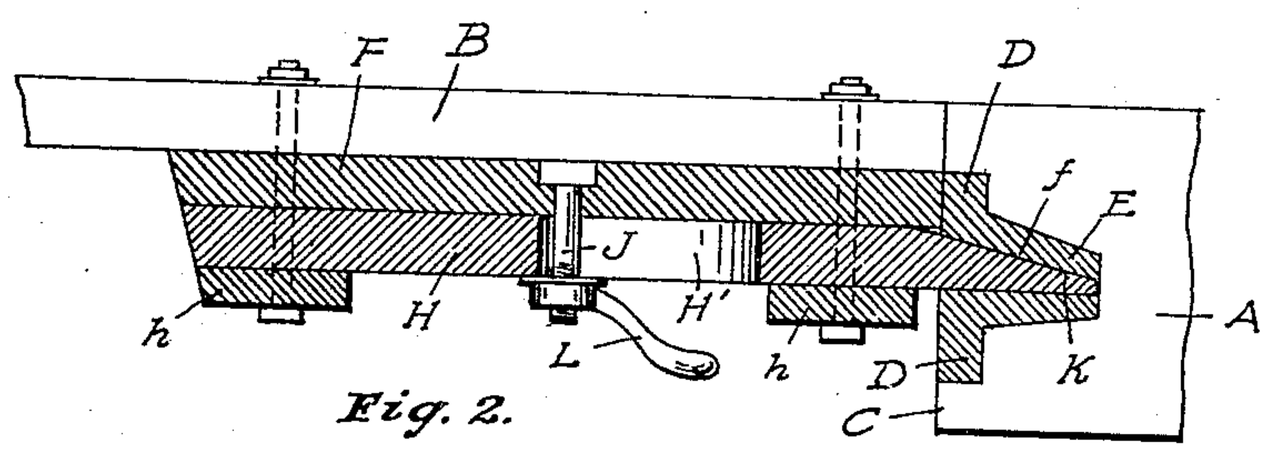

Fig. 2.

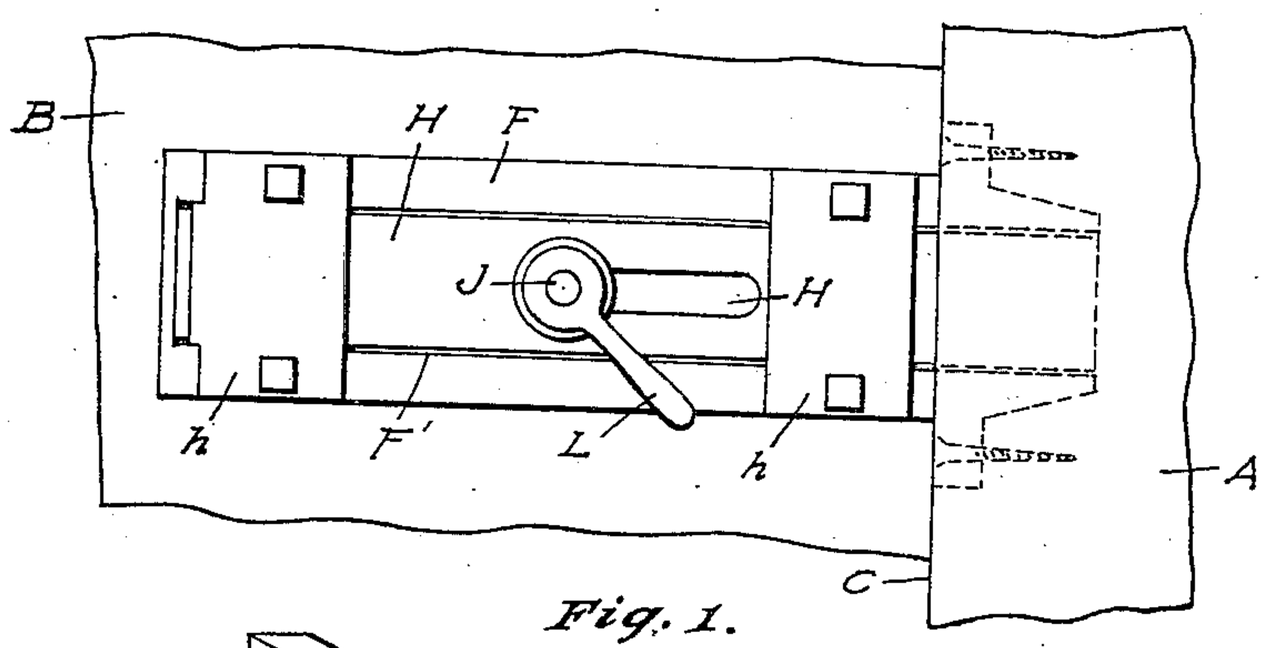

Fig. 1.

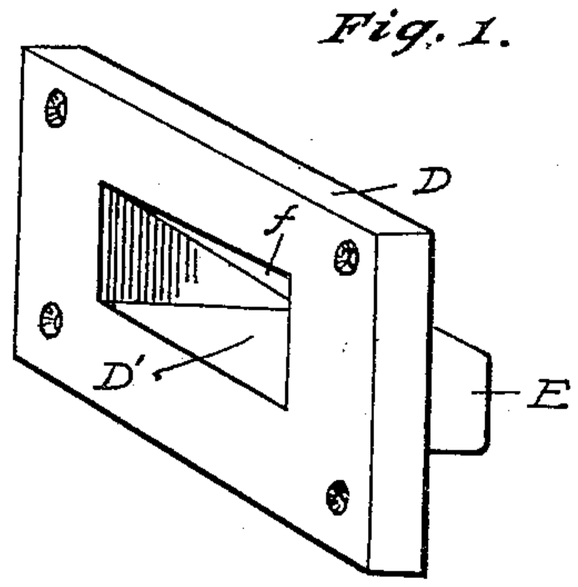

Fig. 3.

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UNITED STATES PATENT OFFICE.

FRANK THOMANN, OF SUMMERFIELD, KANSAS.

BOLT FOR GRAIN-CAR AND OTHER DOORS.

935,284. Specification of Letters Patent. **Patented Sept. 28, 1909.**

Application filed March 26, 1909. Serial No. 485,996.

To all whom it may concern:

Be it known that I, FRANK THOMANN, a citizen of the United States, residing at Summerfield, in the county of Marshall and State of Kansas, have invented certain new and useful Improvements in Bolts for Grain-Car and other Doors, of which the following is a specification.

My object is to provide a grain car door lock device by which the nailing or spiking of the doors to the jambs thereof will be avoided and the consequent injury to the jambs and frequent destruction of the doors when torn loose to unload the grain obviated. I accomplish my object by the mechanism shown in the accompanying drawings, in which—

Figure 1 is a front elevation of the device shown in locked position; Fig. 2 is a longitudinal sectional view showing a plate and lug, provided with a socket, mortised into a jamb of the car door, and a lock bar engaging with said socket, and Fig. 3 is a perspective of the plate, lug and socket therein, one side of the socket beveled to receive a beveled end of the bar, as shown in Fig. 2.

Similar letters refer to similar parts in the several views.

In said drawings A is the side of a car, broken away. B is a door, also broken away, in a side of the car and C is one of the jambs or side posts of the door.

D is a plate and E is a lug integral therewith carried near the inner edge thereof. This plate and its lug are mortised within said jamb so that the face of the plate is even with the face of jamb C. It is held rigid in said position by screws or any suitable means. Said plate D and lug E are provided with a socket D′ extending from the face of the plate backward through the lug. The outer side of said socket is cast at a right angle with the face of said plate but the inner opposite side *f* of the socket is cast at an acute angle with the face of said plate the socket thus narrowing from front to back.

F is an elongated plate having a groove F′ extending horizontally from end to end. H is a lock bar of corresponding shape and size with said groove and *h h* are straps to retain said bar within said groove. Straps *h h* are cast with said elongated plate, or held rigid thereon by bolts and the straps and elongated plate are retained in position on the car door by the same or other bolts or suitable fastening means. The inner end of said bar H is adapted to engage with socket D′; the side *k* of the end of the bar that contacts with the acute angle side *f* of the socket is beveled to correspond with said acute angle in the socket, as shown in Fig. 2. Said bar H is provided with a central horizontal slot H′. J is an axle rigid at its rear end in said elongated plate. The front projecting end of said axle is threaded and carries a threaded revoluble thumb nut L, having a handle integral therewith. The mouth of said socket and the body and rear end of said bar are of corresponding size. By the pressure of the grain and other causes the car doors will necessarily become somewhat out of plumb with the side of the car or jamb. If the lock end of said bar is of the same form and dimensions with the mouth of said socket it would often become difficult to lock the car door. But the beveled narrowed edge *k* of the lock bar, readily enters said socket and its beveled side slides smoothly up the corresponding beveled side of the socket, the movement drawing the end of the elongated plate and the door to which said plate is attached up taut against the face of plate D; with a few turns of the thumb nut the bar, its beveled end in the socket, is held immovable and the door is in position. When it is desired to remove the door to unload the car, or for other purpose, the thumb nut is reversed and the bar drawn out of engagement with the socket. The door can then be lifted out in unsplit or unshattered condition ready for future use.

In these specifications as to my device I have described a single fastener, but four of these fasteners are usually used on each door, two on each side, although two only, or more than four, may be used, as may be required to prevent the door being shoved out of the side of a car by the pressure of the grain.

What I claim and desire to secure by Letters Patent, is:

1. In a lock, a socketed plate and a lug thereon one side of said socket being beveled at an acute angle to the face of said plate, a grooved elongated plate, a lock bar with beveled end adapted to engage with the beveled edge of the socket and travel in said grooved plate, an axle rigid at the inner end in said elongated plate, a revoluble thumb nut on said axle by which to lock said bar in engagement with or release it from said socket, substantially as described and set forth.

2. In a lock, a plate and a lug thereon provided with a socket one side whereof is at a right angle with the face of the plate, the opposite side thereof being at an acute angle, an elongated plate provided with a groove from end to end through the middle thereof, a slidable lock bar adapted to travel in said groove and provided with a central elongated slot, the inner end of said bar beveled on one side to correspond with the beveled side of said socket, straps forward of said bar to retain the same in place, a supporting axle rigid in the back of said elongated plate having a threaded forward end, a revoluble threaded thumb nut carried on said axle to engage with and lock said bar when its beveled end is shoved into contact with the beveled side of the socket and to release said bar from such engagement and permit its withdrawal when it is desired to unlock or remove a door, substantially as set forth and shown.

In testimony whereof, I affix my signature in presence of two witnesses.

FRANK THOMANN.

Witnesses:
E. S. WEEDE,
RAY F. GLICK.