

No. 702,549.

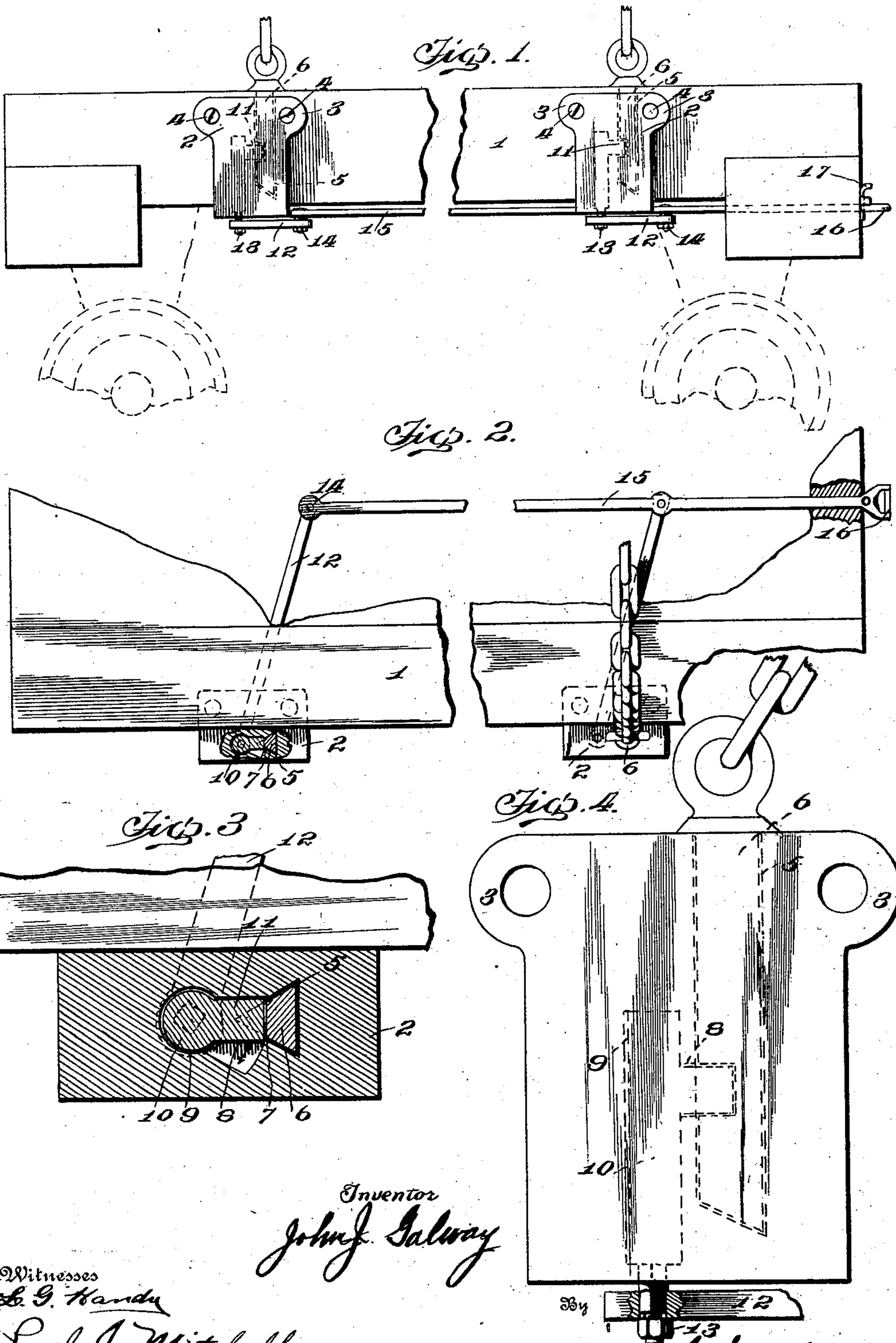
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J. J. GALWAY.

CHAIN RETAINING AND RELEASING MEANS.

(Application filed Feb. 26, 1902.)

(No Model.)



Inventor  
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Witnesses

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# UNITED STATES PATENT OFFICE.

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## CHAIN RETAINING AND RELEASING MEANS.

SPECIFICATION forming part of Letters Patent No. 702,549, dated June 17, 1902.

Application filed February 26, 1902. Serial No. 95,808. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN J. GALWAY, a citizen of the United States, residing at Duluth, in the county of St. Louis and State of Minnesota, have invented certain new and useful Improvements in Chain Retaining and Releasing Means; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to securing and releasing means for load-retaining chains on vehicles, and has for its object the construction of cheap, durable, and convenient means which will hold the ends of the chain which binds the load upon the vehicle and which may be conveniently and safely released from an operating-point located in another direction as to said means than that in which the debarking load will advance.

It consists in a load-retaining mechanism comprising a housing secured to a car or vehicle and having a recess for receiving a removable bolt, means for inclosing a load, a bolt secured thereto and adapted to engage said recess in the housing, and means for holding said removable bolt in said housing or releasing the same, the mechanism being within the control of a person standing out of the way of danger.

It also consists in certain other novel constructions, combinations, and arrangements of parts, as will be hereinafter more particularly set forth and claimed.

In the accompanying drawings, Figure 1 is a side elevation of a portion of a car, showing my said invention in operative position. Fig. 2 is a plan view of a portion of said car, partly in horizontal section, showing my said invention, including the operating draw-bar. Fig. 3 is a detail of my said invention, showing the housing containing the eyebolt and locking means. Fig. 4 is a horizontal section through said housing, bolt, and locking means.

In the drawings, 1 represents the longitudinal side sill of a car, to which is secured the housing 2, forming part of my said invention, which said housing is preferably provided with ears 3, apertured for the passage of bolts

4, securing the same to said sill, and is further preferably provided at the bottom with an inwardly-directed horizontal flange projecting beneath said sill and apertured for the passage of vertically-directed bolts or screws projected into said sill; but all or any of the means to secure said housing to the sill may be of any suitable construction within the scope of my invention. Said housing 2 is further provided with a vertical aperture 5, which aperture 5 is preferably of approximately prismatic or, as desired, of irregular contour in horizontal section and is adapted to receive the shank of an eyebolt (or, if desired, a hook-bolt) 6 of similar horizontal section, which shank is provided with a horizontal slot or notch 7, which in operative position registers with a connecting recess or chamber 8, formed within said housing, which chamber 8 also connects with a vertical bore 9, formed in said housing parallel with said aperture 5, but which bore 9 is preferably closed at the upper end and open at the lower end and is adapted to receive the shaft of a key 10, provided with a tongue 11, which projects into said chamber 9 and in operative position also into said slot or notch 7 of said bolt 6, thereby securing said bolt against vertical movement. The angular or irregular cross-sectional contour of the shank of said bolt 6 and of the receiving-aperture 5 prevents rotary movement of said shank and prevents improper insertion. The projecting lower end of said key-shaft 10 is reduced and squared or otherwise constructed in any suitable manner to engage one of the terminals of an operating-wrench or lever-arm 12, which may be supported thereon by a nut 13 or in any suitable manner. The other terminal of said lever-arm 12 preferably extends beneath said sill and is pivotally attached, as at 14, to one end of a draw-rod 15, preferably extending longitudinally of said car, the free end of said rod being provided with a hand-grip 16, adapted also to engage a locking-pin 17, which may be passed through said hand-grip into the fixed structure of said car in such manner that said pin may be at will disengaged from said rod or said rod disengaged from said pin.

If desired, several wrenches or lever-arms



operating individual chain-retaining means of the character described and all on the same side of the car may be pivotally connected to one draw-bar, thus enabling one operator from a place of safety at the end of the car to release all the ends of the binding-chains on one side of the vehicle. Said mechanism may be duplicated on each side of the car, and each set may work independently of the other. If desired to unload simultaneously from both sides of the car, such independent sets may be used, or, if desired, the operating-wrenches or lever-arms from opposite sets may be pivotally connected to one longitudinal draw-bar, the pivots projecting through slotted apertures in the pivotal ends of said lever-arms.

If desired, each key-wrench may extend longitudinally of the car and be pivoted to an individual transverse draw-rod of the character described. Such chain-retaining means may be secured to either the outer or inner face of the sill or other suitable portion of the structure of said vehicle or may be mortised into the same and may be arranged vertically or inclined or horizontally or may be inverted, according to whether the load is supported on said vehicle or suspended beneath it or according to the direction from which the strain comes, all within the spirit and scope of my invention. In operation preferably only a portion of the load is placed upon the vehicle and the binding-chain thrown over it and secured at or near its ends to the eyes or hooks of the retaining-bolts on opposite sides of the vehicle, which bolts are locked in position, as aforesaid, a little slack being preferably left in said chain. The remaining portion of the load is then preferably piled over said chain, taking up the slack thereof and being retained in position by its own weight and buttressed by that portion of the load beneath said chain. Upon arriving at the point of debarkation the operator by the means described releases the eyebolts on the side to which it is desired to have said load advance, standing himself at the end of the car or upon the opposite side thereof, as the case may be, well out of danger from the falling load.

I am aware that some attempts have been made to construct a practical chain-releasing means; but in those otherwise nearest practical the operator is obliged to stand in front of the falling load, which is usually dangerous.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. A load-securing mechanism, comprising a load-inclosing means, a bolt secured to said load-binding means, a housing carried by a car or other vehicle having a recess formed therein for receiving the said bolt, means

within said housing for locking the bolt therein, and means within the control of an operator standing out of the way of danger for releasing the said bolt, substantially as described.

2. In a chain securing and releasing device the combination with a supporting structure of a housing secured thereto, an eyebolt seated in said housing and provided with a key-receiving slot, a key supported in said housing, comprising a vertical shaft, parallel with said eyebolt, and provided with a horizontal tongue adapted to engage the said key-receiving slot, said housing being provided with an interior chamber adapted to permit the reciprocation of said tongue radially with respect to the longitudinal axis of said shaft, substantially as described.

3. In a chain securing and releasing device the combination with a supporting structure of a housing secured thereto and provided with an interior chamber to permit the radial reciprocation of the tongue of a key, a detachable chain-terminal pin seated in said housing and provided with a key-receiving slot and with chain-attaching means, a key comprising a shaft and an angular tongue, supported in said housing, said tongue being adapted to be radially reciprocated by said shaft with respect to the longitudinal axis of said shaft, and to engage said key-receiving slot, means to operate the said key, substantially as described.

4. In a chain securing and releasing device the combination with a suitable supporting structure of a housing secured thereto and adapted to receive a chain-terminal pin and a key, and provided with an internal chamber to permit the radial reciprocation of said key, a pin seated in said housing and adapted at its outer end to engage a chain and provided intermediate of its ends with a slot adapted to receive a key-tongue having a transversely-radial movement, a key, supported in said housing, comprising a shaft and an angular tongue adapted to radially reciprocate with said shaft about an axis longitudinal of said shaft, and to extend in operative position, into the slot in said pin and in inoperative position to lie wholly within said chamber, a lever mounted on the outer end of said key-shaft, a draw-rod pivotally secured to the opposite end of said lever, means to support said draw-rod and means to secure the same in operative position against movement, substantially as described.

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

JOHN J. GAIWAY.

Witnesses:

JOSEPH CASSADAY,  
JAMES T. WATSON.