

(No Model.)

T. L. McKEEN.

LIFTING DEVICE FOR TWIN JAW CAR COUPLINGS.

No. 472,627.

Patented Apr. 12, 1892.

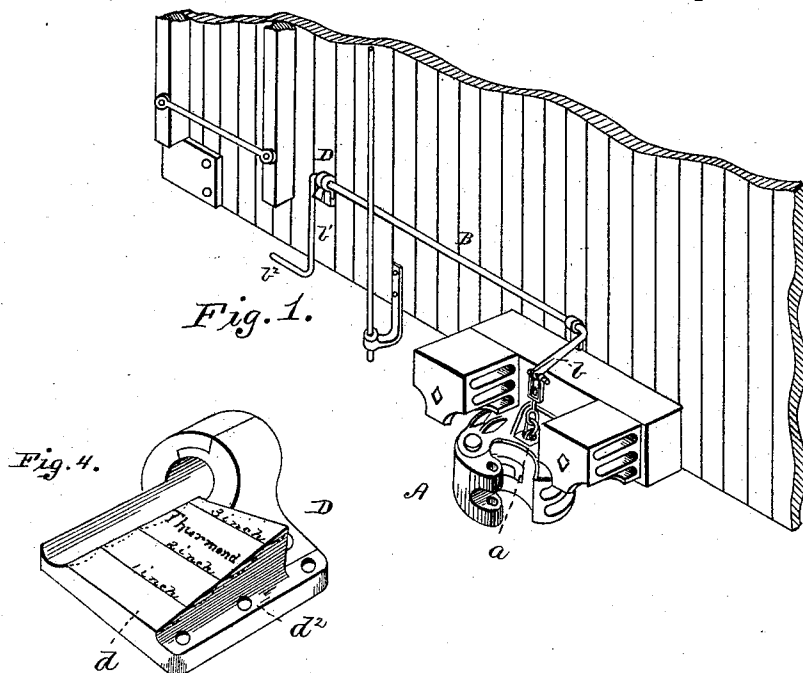


Fig. 2.

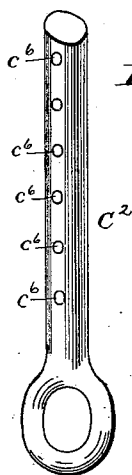
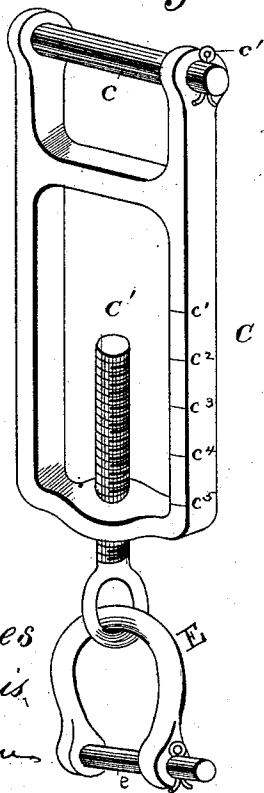


Fig. 3.

Witnesses
M. B. Harris
J. C. Talbot

Inventor
Thomas L. McKen
by
Whitman & Wilkinson
Attorneys

UNITED STATES PATENT OFFICE.

THOMAS L. McKEEN, OF NEW YORK, N. Y., ASSIGNOR TO THE THURMOND
CAR COUPLING COMPANY, OF WEST VIRGINIA.

LIFTING DEVICE FOR TWIN-JAW CAR-COUPPLINGS.

SPECIFICATION forming part of Letters Patent No. 472,627, dated April 12, 1892.

Application filed July 13, 1891. Serial No. 399,303. (No model.)

To all whom it may concern:

Be it known that I, THOMAS L. McKEEN, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Lifting Devices for Twin-Jaw Car-Couplers; 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 adjustable devices for lifting the locking pin or lock in the various kinds of twin-jaw couplers of the master-car-builders' type.

Since one uniform standard of coupler has been adopted on the various roads in the country and the lift of the lock for the various couplers most in use varies materially—as an illustration being approximately one and three-eighths inches for the Gould, two and one-half inches for the Thurmond, three inches for the Janney, and three and one-half inches for the "Standard" couplers and others—when one coupler is to be replaced by another it becomes necessary to put on a new lifting-chain and bracket to suit the new coupler. My invention is intended to do away with the necessity for these changes and to substitute for the various types of lifting bars, brackets, &c., in use a standard lifting device which may be readily adapted to all forms of twin-jaw couplers now commonly in use.

Reference is had to the accompanying drawings, wherein the same parts are indicated by the same letters.

Figure 1 represents a perspective view of a portion of a freight-car, showing my improved lifting device. Fig. 2 represents my improved turn-buckle for adjusting the length of the lifting-chain. Fig. 3 represents a modified form of tongue for the turn-buckle shown in Fig. 2. Fig. 4 represents my improved bracket and inclined rest for the bent arm on the lifting-rod next the handle.

A represents the coupler, having lock *a*.

B represents the lifting-bar, having arm *b*, connected by the turn-buckle, having link C and clevis E, to the lock *a*. The said turn-

buckle is composed of an H-shaped link C, with one end closed and having a female screw-thread cut therein, as shown in Fig. 2. The other end is also closed by a pin *c*, held in place by a cotter *c'*. This pin secures the upper end of the turn-buckle to the arm *b* on the lifting-rod. The screw-bolt C' connects the lower end of the turn-buckle to the clevis E, connected to the lock *a*.

When it is desired to adapt the lifting-chain to a new coupler, take out either the pin *c* or the pin *e* and twist the screw C' to the proper position in the link C. The sides of the link C may be graduated by lines *c'* *c*² *c*³ *c*⁴ *c*⁵, &c. Instead of a screw C' a smooth bolt C², (shown in Fig. 3,) having holes *c*⁶ for a cotter, may be adopted in order to obtain the adjustability in length required.

D represents the bracket, made generally similar to the outer one described in my patent, No. 447,578, granted March 3, 1891, except that the shelf or lifting-face *d* of said bracket is longer and has a greater slope. The said lifting-face may also be corrugated, as shown in dotted lines in Fig. 4, to better hold the arm *b* of the lifting-bar. This lifting-face *d* slopes both toward the edge *d* of the bracket and toward the base *d*² of the same, causing the arm *b'* next to the handle *b*² of the lifting-bar B to hang at a greater or less angle in proportion to the distance it is slid on the said lifting face or shelf. By marking this face *d* with parallel lines or stamping them in any way—for instance, "Gould," "Thurmond," "Janney," "Standard," as shown in Fig. 4—the proper position of the arm *b'* in lifting may be determined. The angle of vertical slope of *d* and the marks for each style of coupler may be readily calculated, for the length of the arm *b* multiplied by the sine of the angle through which that arm is moved is approximately equal to the lift on the lock, and since the arms *b* and *b'* are rigidly attached to or integral with the bar B then the arm *b'* must also move through the same angle with the arm *b*. If the arm *b* be eight and one-half inches long and a lift of two and one-half inches be required, as for the Thurmond coupler, then the vertical angle of the face *d*

where marked for the Thurmond coupler should be the angle whose natural sine is .2923, or seventeen degrees, since

$$2.5 = 8.5 \sin L \therefore \sin L = \frac{2.5}{8.5} = .2923,$$

or an angle of seventeen degrees. This angle may be readily measured on the face d with a templet.

10 The operation of my device is as follows: Having adjusted the screw C' or bolt C^2 to, say, the position c^2 , as for the Thurmond coupler, and secured the turn-buckle in position, lift up on the handle b^2 and slide the bar B
15 along, so that the arm b' may be over the position marked "Thurmond" on the slope d , when slack down the said handle until the said arm rests on the said slope and the right lift will be obtained.

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

1. In a device for lifting the locks of twin-jaw couplers, an adjustable connection between the lifting-bar and the lock, consisting of the combination of an H-shaped link closed at the lower end and having a bolt-hole passing therethrough, a pin connecting the upper end of said link to the lifting-bar, an adjustable eyebolt passing through the said bolt-hole, and a clevis connecting said eyebolt to the lock, substantially as described.

2. In a device for lifting the locks of twin-

jaw couplers, the combination, with the lock and lifting-chain, of a lifting-bar having two arms approximately at right angles to each other, the one arm adapted to engage the lifting-chain and the other arm carrying the handle and adapted to be supported by a projection on the car, and a bracket near said second arm, having a shelf or face sloping both to the outer side of the bracket and downward and furnishing a wedge-like support of varying angularity for the said arm, substantially as described.

3. In a device for lifting the locks of twin-jaw couplers, the combination, with the lock a , of the clevis E, adjustable eyebolt C' , link C, pin c , lifting-bar B, having arms b and b' , and the bracket D, having sloping face d , substantially as described.

4. In a device for lifting the locks of twin-jaw couplers, the combination, with the lock a , of the clevis E, adjustable eyebolt C' , link C, having graduations c' c^2 c^3 , &c., pin c , lifting-bar B, having arms b and b' , and the bracket D, having sloping face d , with vertical graduations thereon, substantially as described.

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

THOMAS L. MCKEEN.

Witnesses:

T. W. GETMAN,

M. C. HASCALL.