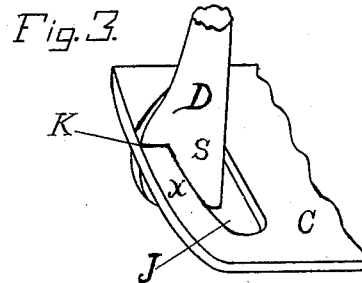
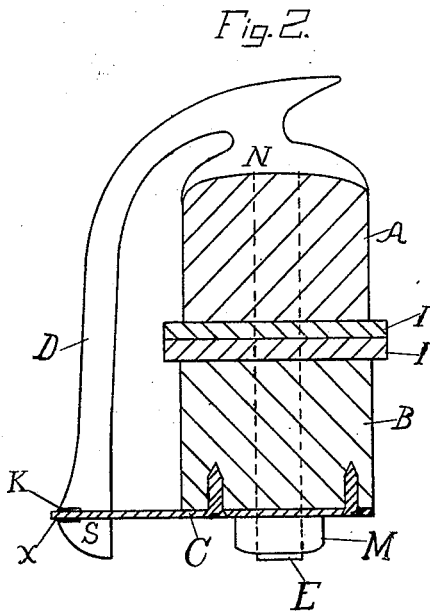
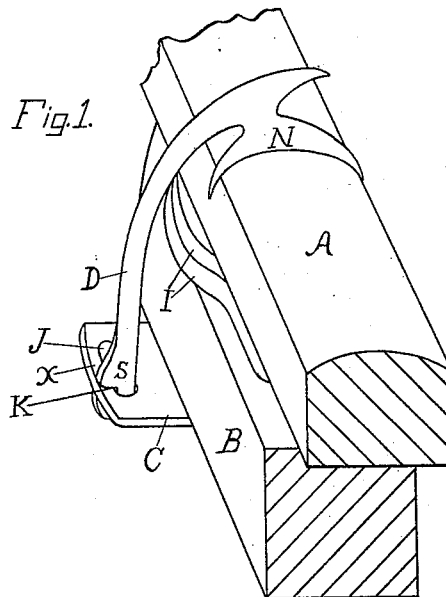


(No Model.)

P. H. FLYNN.
SAFETY BOLT FOR WHIFFLETREES.

No. 421,071.

Patented Feb. 11, 1890.



Witnesses
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PETER H. FLYNN, OF LOS ANGELES, CALIFORNIA.

SAFETY-BOLT FOR WHIFFLETREES.

SPECIFICATION forming part of Letters Patent No. 421,071, dated February 11, 1890.

Application filed May 6, 1889. Serial No. 309,760. (No model.)

To all whom it may concern:

Be it known that I, PETER H. FLYNN, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Improvement in Safety-Bolts for Whiffletrees, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to that class of whiffletree-couplings in which the top of the coupling is braced by an arm extending backward and downward and fastened to some suitable support.

The object of my invention is to simplify and cheapen the coupling, and at the same time increase its strength and security. I accomplish this object by means of the device described herein, and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of my improved safety-bolt applied as when in use. Fig. 2 is a transverse vertical section of a singletree and a cross-bar or doubletree with my safety-bolt connected therewith. Fig. 3 is a perspective view of the lower end of the locking-arm of the bolt, and shows part of the metal plate secured underneath the cross-bar of a pair of carriage-shafts.

A denotes a portion of a singletree, and B denotes the doubletree or cross-bar of a pair of shafts. The plate of metal C is securely fastened by screws to the under side of bar B. This plate extends out in rear of bar B, and a slot is made through it at J, in which the enlarged end of locking-arm D is inserted. The coupling-bolt E extends through the whiffletree A, cross-bar B, and slotted plate C, and is secured by a nut M. Said bolt is provided at the top with an arm D, which is a fixed part thereof, and extends backward and downward to engage with the slotted plate C. The arm D is flattened laterally at its lower end in a plane with the bolt E, and is provided with a notch K transverse to such plane, into which the inner edge of that portion X of plate C outside of slot J fits as a catch, the two forming a safety lock or fastening. The bolt E is secured at its lower end by nut M, and its upper end is provided with a double hook or clasp N, which fits closely

down upon the top of the singletree A when the nut M is tightened or screwed onto the end of bolt E, as represented in Fig. 2. The locking or safety arm is joined to the clasp N, and said clasp and the bolt E and curved safety-arm D are formed and united as a single device. The slot J, made in the arc of a circle, is of sufficient length to allow the lower end of the arm D to move therein with the movements of the singletree, to which it is rigidly attached, but is of dimensions too narrow to allow the notch K to be disengaged from plate C by reason of the vibratory motions of the singletree and the arm D. The plates I I are wearing-irons, secured, respectively, to the singletree A and the cross-bar B in the usual manner, and the center bolt E passes through them.

In order to apply my safety-bolt to singletrees and doubletrees or to singletrees and cross-bars of shafts, the bolt E will be first inserted through the holes made for it in parts A B. Then plate C will be taken in hand and turned to a position in relation to the enlarged or wider portion S of safety-arm D, which will bring slot J parallel with said enlarged diameter at S of arm D, which relative positions of said plate and arm will allow the widened end of safety-arm D to be inserted through the slot J, when plate C will be turned one-quarter of a circle around, which will bring the part X of the plate into the rectangular notch K, formed in arm D, which will securely lock these parts together, when plate C is screwed fast under bar B, the end of bolt E entering the hole in plate C to receive nut M, as shown in Fig. 2. The safety-bolt, being thus attached to whiffletrees or other parts of a carriage, as shown in the drawings, cannot become loose from any cause nor detached without removing the three or more screws from plate C; and even should plate C become loose my safety device cannot be detached and disengage the singletree by reason of the jolting of the vehicle or other accidental cause.

I am aware that it has been proposed to use a whiffletree-coupling consisting of a bolt having a curved arm formed on its head and a plate provided with an apertured lug for the reception of the end of the curved arm, and I am also aware that it has been proposed

to use a whiffletree-coupling consisting of a clip provided with a curved arm engaging with a slotted plate fastened to the under side of the shaft-bar or doubletree; but I am not
5 aware that it has ever been proposed to secure whiffletrees to doubletrees or shaft-bars by means of a bolt passing through the whiffletree, bar, and slotted plate and provided with a curved arm engaging with such plate
10 and provided with the nut M, which clamps the plate C firmly against the bottom of such bar and binds the several parts firmly together, whereby the liability to twist is avoided. It will be observed that the pull of
15 arm D is resisted not only by the screws which fasten the plate to the bar, but also by the nut M, bolt E, and the wood of the bar B.

Having described my invention, I claim and desire to secure by Letters Patent—

1. The whiffletree-coupling comprising the combination set forth of the slotted plate C, secured to the under side of the cross-bar, the nut M, and the bolt E, extending through the whiffletree, cross-bar, and slotted plate, and provided with the arm D, which engages
25 with the slotted plate.

2. The safety appliance or bolt comprising the center bolt E and the curved arm D, flattened laterally at its lower end in a plane with the bolt E, and provided with the notch
30 K transverse to such plane, in combination with a projecting plate to which said locking-arm can be locked, substantially as specified.

PETER H. FLYNN.

Witnesses:

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J. C. OLIVER.