## W. B. COATES <br> Car Coupling.

No. 61,399.
Patented Jan. 22. 1867.


Witnesses
Elmer Pan Coles forever Mather


Fig.
(ㅇ) İ Inventor:
Melian B. Coals

## 

## WILTTAM B. COATES, OF PHILADELPEIA, PENNSYLVANTA.

Lefters Patent No. 61,399, dated January 22, 1867.

## IMPROVEMENT IN CAR-COUPLING.



## TO ALL WHOM IT MAY CONCERN:

Be it known that I, William B. Coates, of the city of Philadelphia, and State of Pennsylvania, have invented a new principle of construction for Self-Locking Safety Coupling Pins; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in constructing coupling pins for cars and other parposes so as to be self-locking when dropped in, and secure against jolting or working out, yet easily removed by simply lifting up by the handle.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation. On reference to the drawings, which form a part of this specification-

Figure 1 is a vertical side elevation of my self-locking safety coupling pin.
Figure 2 is a vertical front elevation of the same.
Figure 3 is a vertical side view elevation of handle, cap, rod, shackle, and lock.
Figure 4 is a diminished vertical front view elevation of the rod.
Figure 5 is a perspective view of shackle.
The same letters refer to similar parts throughout the several drawings.
I construct the pin of any desired metal or size to suit the purpose required. The body C is cut out at its lower portion to form the groove P; and a hole drilled vertically through the main body, as shown by dotted lines at $Q$, then a depression of any required depth is made in the head $B$, as shown at $O$. A short wire is inserted in the head, as shown at.F, for the angular part of cap $A$ to work in, as shown at $F^{\prime \prime}$. The bolt-hole atat, and lock check-pin hole at K , are next drilled. The lock is made by cutting out of thick sheet steel, and requires little filing. The rod $H$ is made of steel; the lower part has each side (front and back) flat, with shoulders, as shown at $N \mathrm{~N}$, but is rounding at left, from shoulders to back part at L . The upper part of rod has a shoulder at MM. The shackle is secured to rod by pin T after its insertion in the slot of lock D. The top of rod is next run up the opening and fitted in the cap, the shoulder setting up closely under the tongue-E, to which it is secured by, pin m. The handle $G$ is sesured at top of rod by a pin running through, and the ends rounded or riveted. The rod can be of one entire piece, or part solid, part jointed, or part chain, as shown by dotted lines at $a$ and $b$ and $c$. The lower portion of rod is prevented from passing up through the hole $Q$ by the shackle R.

The operation is as follows: Upon taking hold of the handle the weight of the pin drops, which causes the shackle to slide up the slot in the lock, and this acction drives the latter into the groove, and allows the withdrawal of pin from the hole. In coupling, the pin being inserted in the draw-head and dropped, the weight of the cap, handle, rod, (ehain attached to handle,) and left end of lock, causes the rounding portion of the lower part of rod to press on the rounding part of the top and side of lock, which throws the shackle out and down the slot, and places the lock horizontally at right angles with the body of the main pin. The end of rod pressing upon the lock prevents jolting or working up, and thus makes a safe pin for all practical purposes. The parts A and E are to prevent rain and dirt from penetrating Q . The jolting prevents the freezing of the parts. The letter S shows horizontal line of lock. Letter $\mathrm{F}^{\prime \prime}$ shows angular pat of cap.

What I clain as my invention, and desire to secure by Letters Patent, is-
The coupling pin, constructed in the manner and for the purposes deseribed in this specification.
WILLIAM B. COATES.

## Witnesses:

Elmer Ruan Coates,
Louis M. Mather.

