F. ARMSTRONG.

SHACKLE BOLT FASTENING.

No. 181,894. Patented Sept. 5, 1876.

Fig 1.

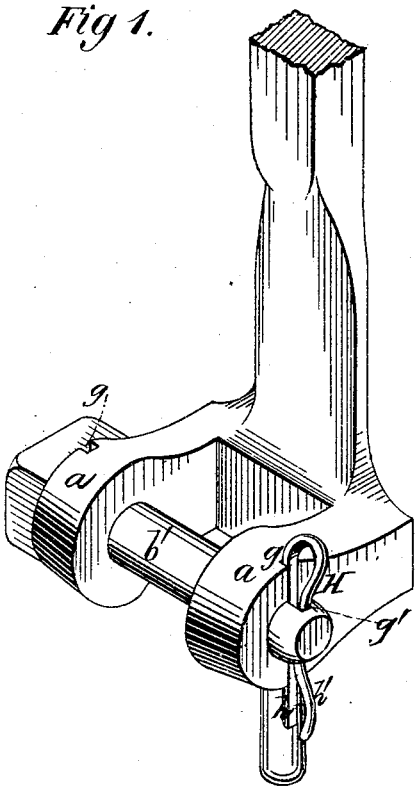


Fig 2.

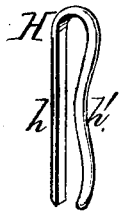
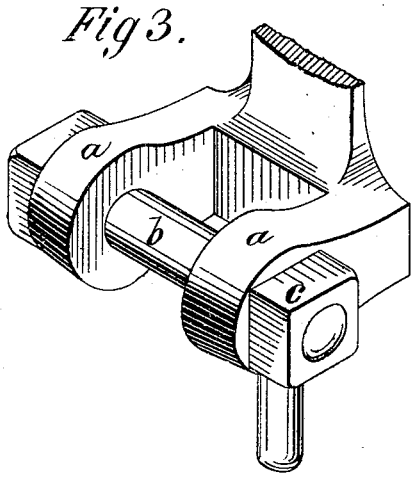


Fig 3.



Witnesses:
James Martin &
J. P. Theodore Laug.

Inventor:
Frank Armstrong
by
Munn, Fenwick & Lawrence
attorneys.

UNITED STATES PATENT OFFICE.

FRANK ARMSTRONG, OF BRIDGEPORT, CONNECTICUT.

IMPROVEMENT IN SHACKLE-BOLT FASTENINGS.

Specification forming part of Letters Patent No. **181,894**, dated September 5, 1876; application filed July 10, 1876.

To all whom it may concern:

Be it known that I, FRANK ARMSTRONG, of Bridgeport, in the county of Fairfield and State of Connecticut, have invented a new and Improved Shaft-Shackle and Bolt; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a perspective view of my shaft-shackle and bolt; Fig. 3, a like view of the old mode of construction, and Fig. 2 a lock-spring for retaining the bolt shown in Fig. 1 in working relation to the shackle.

The drawings, Figs. 1 and 3, show a shackle partly completed—that is to say, completed so far as the parts are concerned which are necessary to attach the shafts of a carriage thereto.

In Fig. 3 the shoulders, as at *a*, are made to receive a bolt, which is held in position in the ordinary way by a nut, *b*. The well-known objections to this construction are, that the bolt turns in the shoulders, and thus wears away, causing a disagreeable rattling of the bolt, while the nut *c* is liable to be lost off, and thus subject the occupants of the carriage to an accident due to the uncoupling of the thills.

These objections my invention is intended to obviate, while, at the same time, the uncoupling of the shafts of a carriage from the shackle can be more conveniently and readily effected. To this end I provide the shoulders *a*, as in Fig. 1, with a rectangular groove, as at *g*, and also perforate the bolt *b'* with a rectangular slot near its outer end, which is fitted to receive the spring-lock H. (Shown in Fig. 2.) This spring-lock is made of steel, in the form shown in last-named figure, one portion of it, as at *h*, being in the likeness of a rectangular bar, so that when the spring-lock is inserted in the slot *g'* of the bolt *b'*, as shown in Fig. 1, the part *h* will seat itself into the groove *g* of the shoulder *a*, and thus prevent the bolt *b'* from turning in the shoulders, and becoming worn and loose.

When the spring-lock, as shown in Fig. 2, is to be inserted in the bolt *b'*, its two limbs are compressed and thrust into the slot *g'*, whereupon the expansion of the outer limb *h'* serves, by its curved form, to act as a self-locking device within the slot *g'*, to hold the bolt *b'* in permanent position. This spring-lock H, it will be perceived, can readily be driven out from the bolt *b'* whenever desired; whereas, in case of the use of a nut, *c*, as in Fig. 3, it is impossible, ofttimes, to remove the nut without the use of a wrench.

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

The combination of a shackle having one or more recesses, *g*, a shackle-bolt, *b'*, and a lock, H, substantially as and for the purpose described.

Witness my hand in the matter of my application for a patent for an improved shaft-shackle and bolt this 7th day of July, 1876.

FRANK ARMSTRONG.

Witnessess:

F. P. NORMAN,

D. B. CLUTE.