C. G. LAZEAR.

King-Bolt.

No. 161,799. Patented April 6, 1875.

Fig. 1.

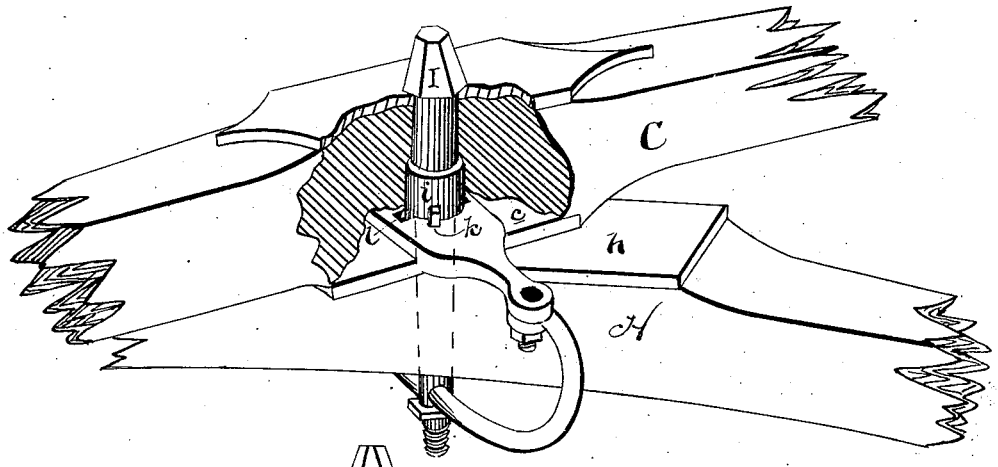


Fig. 2.

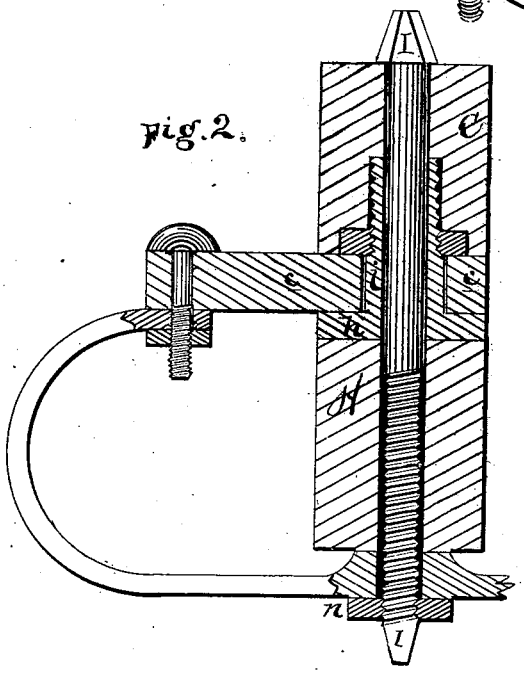
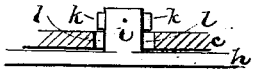


Fig. 3.



WITNESSES.

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UNITED STATES PATENT OFFICE.

CORNELIUS G. LAZEAR, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN KING-BOLTS.

Specification forming part of Letters Patent No. **161,799**, dated April 6, 1875; application filed October 1, 1874.

CASE B.

To all whom it may concern:

Be it known that I, CORNELIUS G. LAZEAR, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Carriages; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of the front axle and bolster, partially in section to show the construction of the king-bolt. Fig. 2 is a transverse section of the king-bolt. Fig. 3 is an elevation, showing more particularly the construction represented in Fig. 1.

This improvement relates more particularly to that class of carriages known as buggies, though I do not confine myself to carriages of that class; and it consists in an improved safety axle-coupling or king-bolt.

Heretofore, carriages have been generally constructed with the axle-connection to the bolster consisting of a single bolt, and the loss of the king-bolt nut, or the breaking of said bolt, permits the separation of the axle from the bolster. To remedy this and avoid the danger of such an accident, a hollow sleeve has been placed upon the axle, and projected up through the bolster-plate, so that the wear would be sustained by said sleeve, and the king-bolt passing through said sleeve would merely serve as a tie-bolt to hold the parts together; but it is evident that if, with this structure, the king-bolt should become detached or disabled, the axle would separate from the bolster.

The object of my invention is to prevent the possibility of such accidental separation without the destruction of all the parts. I therefore place upon the upper end of the hollow sleeve a holding device to prevent its removal from its place in the bolster-plate independent of the king-bolt, and employ the latter as a tie-bolt, and incidentally as an additional safeguard against accident in case of the breaking of the sleeve or its connections.

That others may more fully understand my invention, I will more particularly describe it.

The axle-plate *h* upon the front axle H has forged upon it a hollow sleeve, *i*, which is fitted to a socket in the bolster-plate *c*, and said sleeve working in said socket forms the effective joint under ordinary circumstances; and to prevent any accidental displacement of the parts of said joint, I place upon the sleeve *i*, above the socket in bolster-plate *c*, a holding device which will keep the parts together. This holding device may be composed of one or more lugs, *k*, as shown in Fig. 1, or it may be a key or a screw-nut, as shown in Fig. 2. If the lugs *k* are employed, notches *l* are made in the plate *c*, through which said lugs may pass when the axles are brought to position nearly or quite at right angles to each other, and the parts may then be detached.

The portion of the sleeve *i* which projects above the bolster-plate is embedded in the bolster, and is not, therefore, easily accessible, if it becomes necessary to tighten up the axle-joint. I therefore place the bolt I in the usual position of the king-bolt—that is, through the bolster and axle, and through the hollow sleeve *i* and this nut *n* upon the lower end of said bolt I serves to bind the axle-joint, and tighten it up whenever it may be required; and while said bolt I does not form a bearing portion of the axle-joint, it serves to render an accidental separation of said joint impossible, unless the whole joint be destroyed.

Having described my invention, what I claim as new is—

1. Combined with the bolster-plate *c*, having a socket, the axle-plate *h*, constructed with a sleeve, *i*, fitted to said socket, and a holding device to lock the parts together and prevent accidental displacement, as set forth.

2. The bolster-plate *c*, provided with a socket, and the axle-plate *h*, formed with a hollow sleeve, *i*, and a holding device to lock the parts together, combined with a tie-bolt, I, extending through said sleeve, and through the bolster and axle, as set forth.

C. G. LAZEAR.

Witnesses:
R. D. O. SMITH,
F. B. TOWNSEND.