

(No Model.)

T. A. McGOVERN.
KING BOLT FOR VEHICLES.

No. 347,435.

Patented Aug. 17, 1886.

Fig. 1.

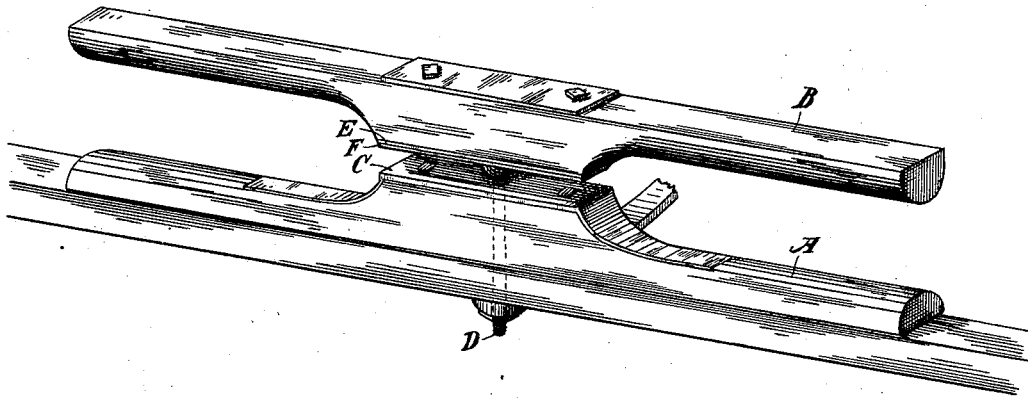
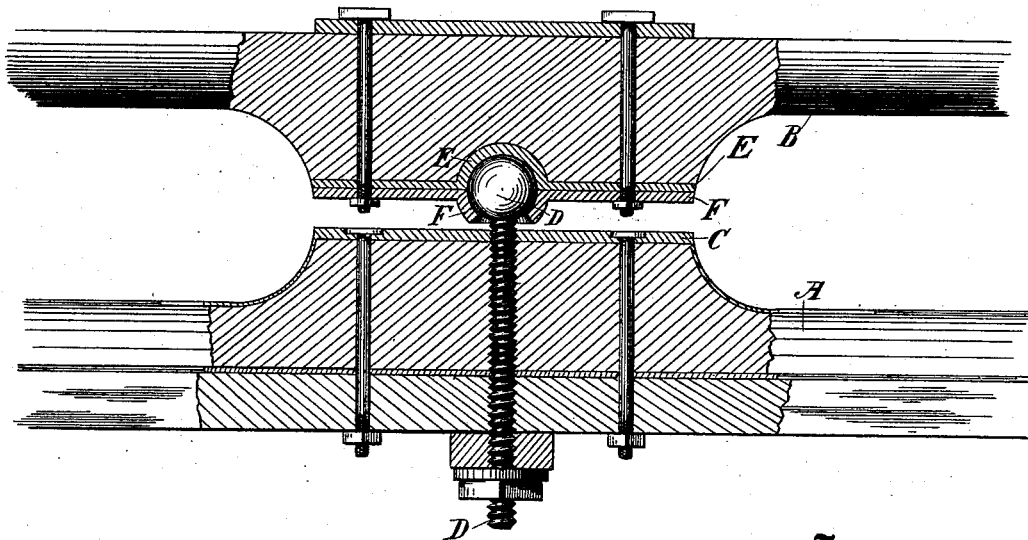


Fig. 2.



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UNITED STATES PATENT OFFICE.

THOMAS A. MCGOVERN, OF BOLINAS, CALIFORNIA.

KING-BOLT FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 347,435, dated August 17, 1886.

Application filed December 18, 1885. Serial No. 186,082. (No model.)

To all whom it may concern:

Be it known that I, THOMAS A. MCGOVERN, of Bolinas, Marin county, State of California, have invented an Improvement in King-Bolts for Vehicles; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to certain improvements in the running-gear of vehicles; and it consists in an improved king-bolt and means for connecting the front axle and the bolster, upon which the body of the vehicle rests.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a perspective view showing the front axle, the bolster, and my improved king-bolt. Fig. 2 is a front elevation, with a section taken through the central portion to show the king-bolt and its attachment.

In the ordinary construction of vehicles the bolster is united to the front axle by means of a king-bolt, which usually extends through both bolster and axle, having a head above the bolster and locking-nuts beneath the axle to hold the two together. The sand-plates between the bolster and the axle run close together, so that in turning they rub upon each other, and as the different wheels of the wagon pass over the irregularities in the surface considerable strain and friction result between these plates.

In my improvement, A is the front axle-bed, and B the bolster. A plate, C, is fixed upon the top of the axle-bed, and the king-bolt D screws down through this plate, projecting sufficiently below the axle to receive the lock-nuts by which its lower end is held, while the upper end is securely held in the plate C by being screwed through it, as before described.

The head of the king-bolt is made in the form of a ball, and projects slightly above the plate C. Upon the lower part of the bolster are secured two plates, E and F, each of which has a semi-spherical hollow cup formed upon it, so that when the two are placed together and bolted to the bolster they will hold the spherical head of the king-bolt between them, the bolster being supported upon this head above and clear of the plate C on the top of the axle-bed. By this construction the bolster is allowed to have a universal movement around this joint, and this is peculiarly ad-

vantageous to vehicles, and especially those which have two or more reaches, as it relieves them from all strain and twisting incident upon the four wheels of the vehicle passing over irregularities in the surface of the ground. It will be seen by this construction that the wheels may rise and fall, so that the front axle will take various angles with relation to the bolster, the bed of the vehicle, and the rear axle, without putting any strain upon these parts, and without bringing the plates intermediate between the bolster and the axle-bed into contact.

By screwing the king-bolt through the plate upon the top of the axle-bed, or through the axle, it may be adjusted so as to raise the bolster more or less above the axle, and it also serves to prevent accidents in case the nuts should become detached from the lower end of the king-bolt; or if the king-bolt should break at any point below where it screws into the upper plate there would be no possibility of the king-bolt coming out by reason of sudden jars or violent movement of the body on the springs.

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

1. The front axle of a vehicle having a metal plate upon the center of its upper side, a king-bolt threaded so as to screw through this plate, and also having lock-nuts upon its lower end below the axle, the head of said king-bolt being spherical, in combination with hemispherical sockets secured to the lower central portion of the bolster and inclosing the head of the king-bolt, substantially as and for the purpose herein described.

2. In a vehicle, the bolster having the two plates secured to its lower central portion, each plate having a hemispherical or cup-shaped socket fitted so as to inclose the spherical head of the king-bolt, in combination with a threaded king-bolt, an axle having a screw-threaded plate through which the king-bolt passes, and in which it may be adjusted to raise or lower the head, substantially as herein described.

In witness whereof I have hereunto set my hand.

THOMAS A. MCGOVERN.

Witnesses:

S. H. NOURSE,
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