(No Model.)

W. F. BIDWELL.

KING BOLT FOR VEHICLES.

No. 343,428. Patented June 8, 1886.

Fig. 1

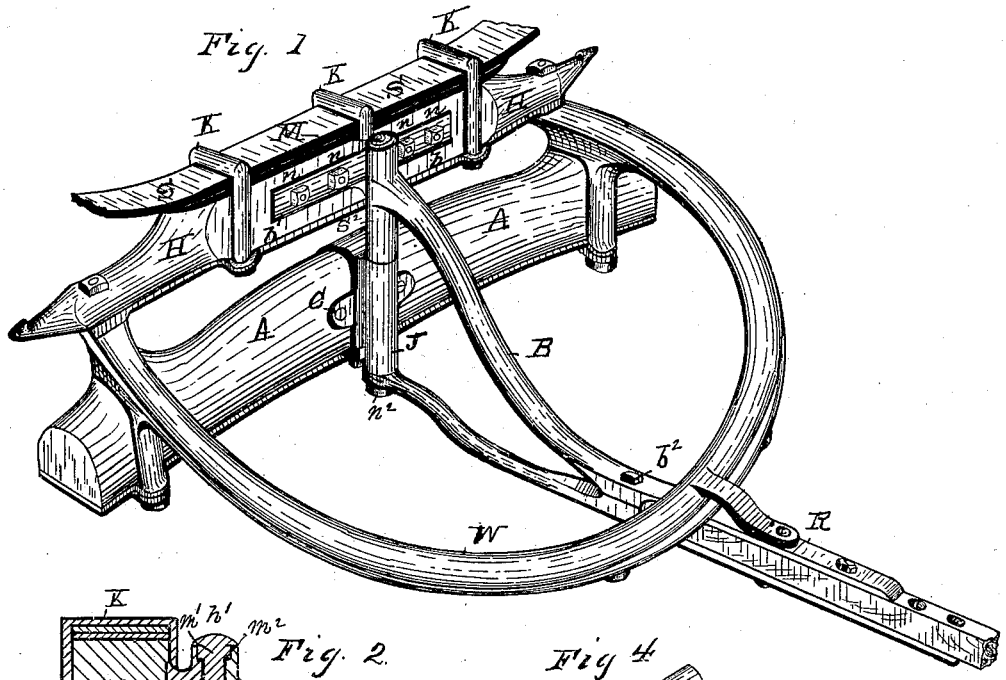


Fig. 2

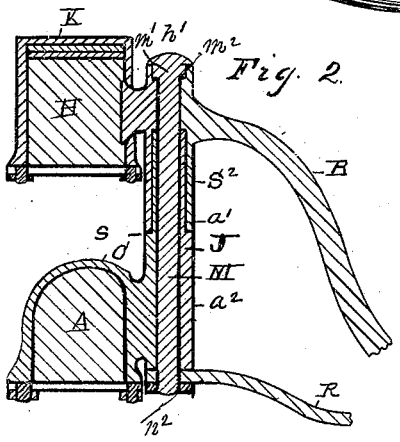


Fig 4

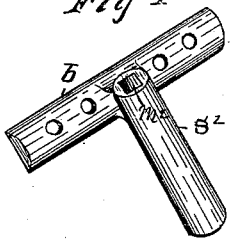
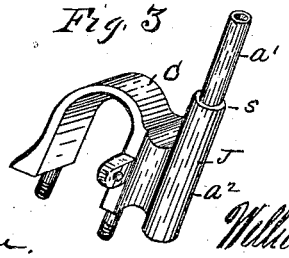


Fig. 5

Fig. 3



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UNITED STATES PATENT OFFICE.

WILLIAM F. BIDWELL, OF TROY, NEW YORK.

KING-BOLT FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 343,428, dated June 8, 1886.

Application filed October 28, 1885. Serial No. 181,152. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM F. BIDWELL, of the city of Troy, county of Rensselaer, State of New York, have invented a new and useful Improvement in King-Bolts for Vehicles, of which the following is a specification.

My invention relates to king-bolts and their connections with the head-block and front axle of vehicles, the object and purposes of my invention being to make them secure in their connection and noiseless in their action.

Accompanying this specification, to form a part it, there is a sheet of drawings containing five figures illustrating my invention, with the same designation of its parts by letter-reference used in all of them.

Of these illustrations, Figure 1 is a perspective of the head-block, front axle, fifth-wheel, and reach of a vehicle with my improved king-bolt connected therewith. Fig. 2 is a cross-section taken through the king-bolt, head-block, front axle, and a part of the reach. Fig. 3 is a perspective of the detached king-bolt, journal-box, and mechanism for connecting said journal-box with the front axle. Fig. 4 is a perspective of a sleeve adapted to be passed down over the before-named journal-box to rest on a shoulder formed thereon, said sleeve being adapted to be connected with the king-bolt. Fig. 5 shows the king-bolt made with a square shoulder immediately beneath the head, adapted to enter a square socket in the sleeve to connect the latter and bolt, to prevent the bolt from turning in the sleeve.

The several parts of a vehicle and those constituting my invention are designated by letter-reference, and the function of the parts is described, as follows:

The letter H indicates the head-block, S the spring, and K the clips connecting said spring and head-block.

The letter A designates the front axle, R the reach, and W the fifth-wheel, the former constituting the ordinary and well-known parts of a vehicle.

The letter J designates the king-bolt journal-box, and *s* a shoulder made thereon by reducing its exterior diameter at *a'*; C, a clip formed on the journal-box to attach the latter to the front axle.

The letter S^2 indicates a sleeve adapted to be passed down over the journal-box J, so as to rest on the shoulder *s*, and *b* a bar connected with said sleeve and adapted to attach it to the head-block by means of bolts and nuts *n n*.

The letter B designates a brace connecting the sleeve S^2 with the reach R by means of a bolt, b^2; and the letter M indicates the king-bolt proper, made with the square part *m'* just below the head *h'*, said square part of the bolt being adapted to fit into the square upper end, m^2, of the sleeve S^2, so as to connect the latter and the bolt and prevent its turning therein, and n^2 indicates the lower threaded end of the bolt and a securing-nut. The exterior of the journal-box J is made to have a smaller diameter at *a'* than at a^2, with the shoulder *s* arranged between said parts *a'* and a^2. The upper part of this king-bolt journal-box exterior above the shoulder *s* is adapted to receive the sleeve S^2, so that the latter can be passed down over it with the lower end of the sleeve resting on the shoulder with the journal-box J free to turn thereon. The king-bolt M is constructed to pass down through the sleeve S^2 and journal-box J and be secured as thus placed by means of a head, *h'*, on the upper end and a thread and nut, n^2, at the lower end of said bolt. The upper end of the king-bolt, where immediately beneath the head *h*, is made square, as designated at *m'*, and the upper end of the sleeve S^2 is also made correspondingly square at m^2, so as to secure the square part of the bolt thereat, so that when the bolt is inserted within the said sleeve and journal-box J and secured therein the sleeve and bolt cannot turn. The journal-box J being secured to the front axle, as the latter pivots to move to one side or the other in changing the direction of the vehicle the king-bolt and sleeve S^2 do not turn, but the journal-box J turns on the bolt M, and also where within the sleeve S^2 at *a'*, above the shoulder *s*. As thus made, the turning parts of the vehicle have two vertical bearings on which to move, with their surfaces so housed in that grit and dirt cannot reach them, with the parts so arranged that they have one transverse bearing—the shoulder *s* and the vertical bearings of the journal-box J where its part *a'* is within the sleeve S^2 and where on the king-bolt. Thus the chances of wearing away are

much reduced, and the noise produced by the engagement of loosely-connected parts is avoided.

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

1. The combination of the sleeve S^2, constructed with the square socket m^2 at its upper end, and the bar b, adapted to connect it with the head-block, the journal-box J, made with the reduced exterior a', shoulder s, and adapted to attach to the front axle, and the king-bolt M, having the head h', the threaded end and nut n^2, and made with the interior square part, m', immediately beneath the head, all substantially as and for the purposes set forth.

2. The combination of the sleeve S^2, constructed with the square socket m^2 at its upper end, and the bar b, adapted to connect it with the head-block, the journal-box J, made with the reduced exterior a', shoulder s, and adapted to attach to the front axle, and the king-bolt M, having the head h', the threaded end and nut n^2, and made with the interior square part, m', immediately beneath the head, and the brace B, all substantially as and for the purposes set forth.

Signed at Troy, New York, this 18th day of July, 1885, and in the presence of the two witnesses whose names are hereto written.

WILLIAM F. BIDWELL.

Witnesses:
CHARLES S. BRINTNALL,
GEO. A. DARBY.