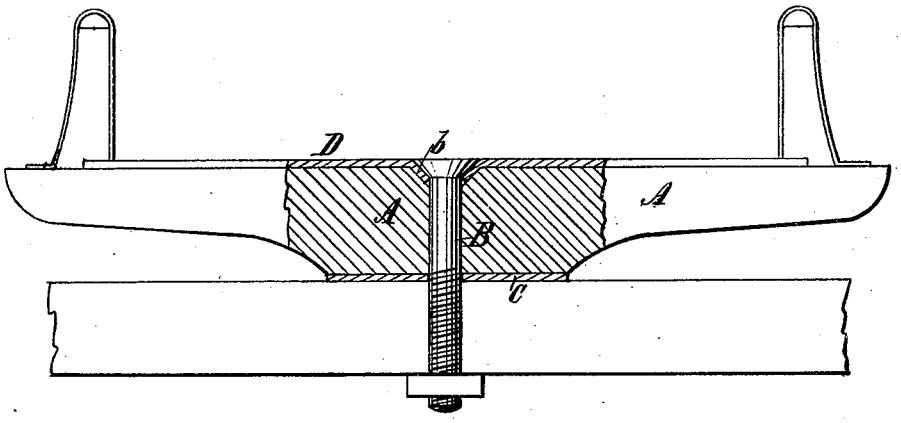
J. M. STUDEBAKER & H. L. HINDS.

WAGON-BOLSTER.

No. 180,076. Patented July 18, 1876.

Fig. 1.



Witnesses
John Tyler
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UNITED STATES PATENT OFFICE.

JOHN M. STUDEBAKER AND HUGH L. HINDS, OF SOUTH BEND, INDIANA.

IMPROVEMENT IN WAGON-BOLSTERS.

Specification forming part of Letters Patent No. **180,076**, dated July 18, 1876; application filed April 10, 1876.

To all whom it may concern:

Be it known that we, JOHN M. STUDEBAKER and HUGH L. HINDS, both of South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Wagon-Bolsters; and we do hereby declare that the following is a full and exact description thereof, reference being had to the accompanyings drawings, making a part of this specification.

Our invention relates to improvements in the front bolster of wagons. It has for its object to provide a suitable receptacle for the head of the king-bolt without weakening the bolster; and with this object in view our invention consists in furnishing the bolster with a top plate of metal, bored centrally with the bolster, and countersunk to receive the head of the king-bolt, so that the top of the head of the bolt shall lie in the same plane with the top surface of the plate, whereby the bottom of the wagon-body is permitted to rest directly and evenly upon the top surface of the bolster, and the latter is preserved against the ordinary wear and weakening induced by the king-bolt as at present applied.

Previous to our invention it has been customary to countersink the head of the king-bolt into the top of the bolster, in order to allow the body to lie flush upon the same; but in this construction the motion of the bolster upon the axle soon induces excessive wear by friction with the bolt, ultimately so weakening the bolster that it breaks or becomes necessary to replace it with a new one.

To partially avoid this difficulty it has sometimes been customary to allow the head of the king-bolt to project above the bolster; but in this construction the body of the wagon necessarily rests upon the projecting head of the king-bolt and rocks thereon, so that in a short time a hole is worn into the body.

Our invention overcomes all the objections existing, and enables us to provide a light and durable bolster, which receives the wagon-body in a perfect plane therewith.

To enable those skilled to more readily understand our invention, we will describe the same, referring by letters to the accompanying drawing, which represents a wagon-bolster and king-bolt embracing the features of our invention.

A represents the bolster, which is bored centrally to receive the shank of the king-bolt B, which has a beveled head. The under side of the bolster A is furnished with a metal plate, C, in the ordinary manner, having a hole in it coincident with the hole in the bolster, and the top of the bolster is furnished with a metallic plate, D, upon which the wagon-body rests, and which plate is bored centrally to permit the passage of the king-bolt, the metal around such hole being swaged or turned downwardly to form a countersink, as seen at *b*, for the head of the king-bolt, the top of the bolster being previously countersunk to receive the turned-down metal.

It will be seen from this construction of bolster that the king-bolt is retained in a perfectly vertical position by the parallel plates C and D, and that the head of the bolt lies snugly within the countersink in the top plate D, and is held in place by the wagon-body, so that there is no lateral movement or wabbling of the bolt, and hence no wear upon the bolster, and that the latter is not weakened by cutting a hole larger than the king-bolt.

It will also be observed that by the turning down of the metal surrounding the bolt-hole in the top plate an increased bearing-surface for the bolt-head is obtained with a thinner plate than could be obtained by an ordinary countersink or reaming out of the metal, and that it also serves to hold the plate in place, and thus relieves to a great extent the strain upon the rivets employed to secure the plate to the bolster.

What we claim as new, and desire to secure by Letters Patent, is—

1. A wagon-bolster, bored and countersunk, and provided with a top plate bored to admit the passage of the king-bolt, and having the surrounding metal forced or turned down into the countersink of the bolster, thus forming a firm and long bearing for the bolt-head with a comparatively thin plate, substantially as hereinbefore set forth.

2. In combination with a wagon-bolster,

bored and countersunk, the top plate D, countersunk as described, and the bottom plate C, whereby the king-bolt is maintained in a vertical position, and the head received so as to lie in the same plane with the top surface of the plate D, substantially as and for the purpose set forth.

Witness our hands and seals this 30th day of March, A. D. 1876.

J. M. STUDEBAKER. [L. S.]
HUGH L. HINDS. [L. S.]

Witnesses:
J. L. TAYLOR,
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