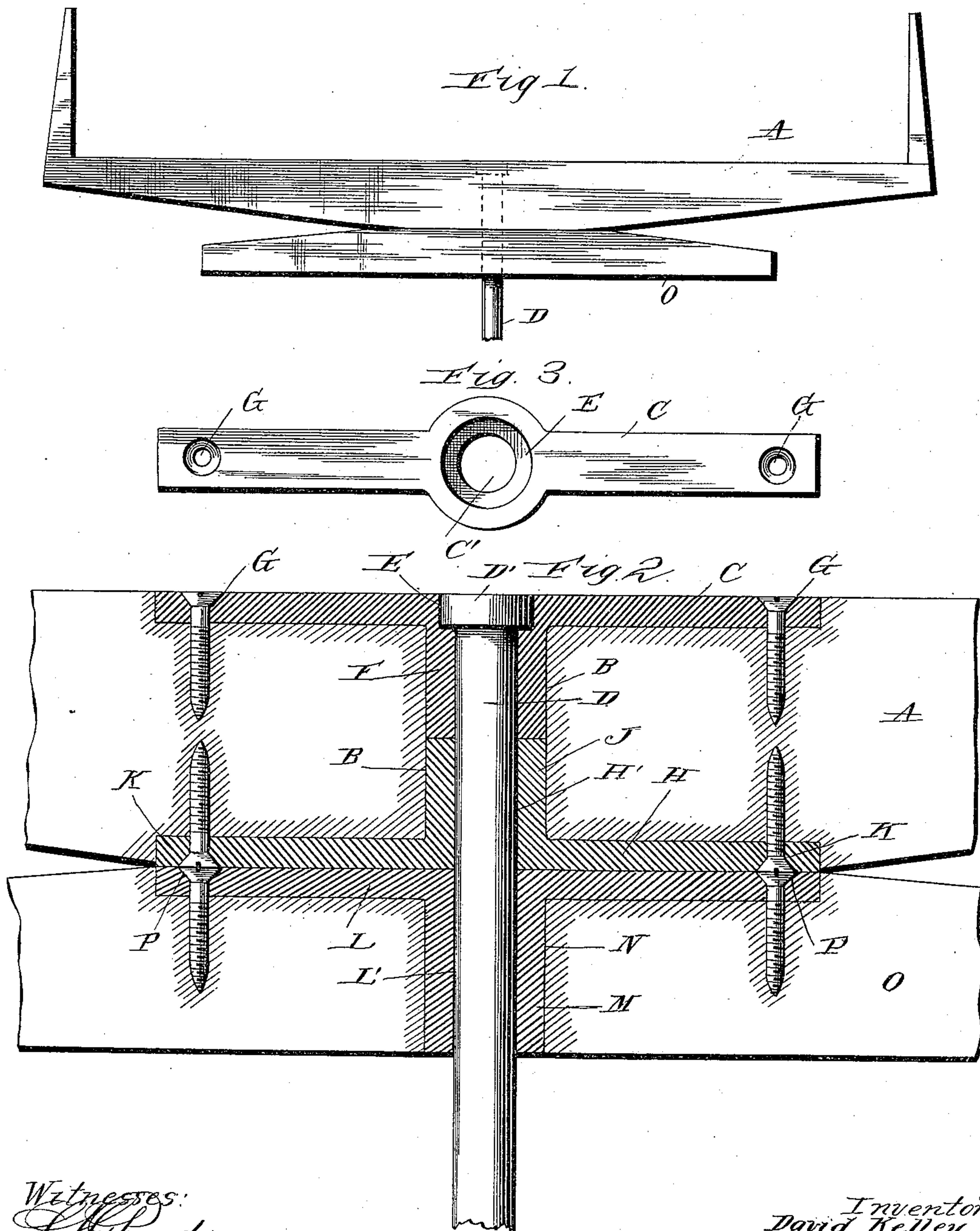


(No Model.)

D. KELLY & J. J. COX.
BOLSTER PLATE.

No. 430,291.

Patented June 17, 1890.



Witnesses:

C. C. Burdine.

C. C. Burdine.

Inventor
David Kelley
John J. Cox

By

John G. Manahan
their Attorney

UNITED STATES PATENT OFFICE.

DAVID KELLEY AND JOHN J. COX, OF WEEDMAN, ILLINOIS.

BOLSTER-PLATE.

SPECIFICATION forming part of Letters Patent No. 430,291, dated June 17, 1890.

Application filed December 17, 1889. Serial No. 334,067. (No model.)

To all whom it may concern:

Be it known that we, DAVID KELLEY, of McLean county, and JOHN J. COX, of Pratt county, both citizens of the United States, 5 having their post-office address at Weedman, in the county of McLean and State of Illinois, have invented certain new and useful Improvements in Bolster-Plates; and we do declare the following to be a full, clear, and 10 exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, 15 which form a part of this specification.

Our invention relates to improvements in bolsters for wagons; and it consists in novel devices to prevent the king-bolt from chafing or cutting away the bolster and sand-board.

20 The object of our invention is to so seat the king-bolt in the bolster and in the underlying sand-board as to relieve said parts of the strain and jar of the king-bolt, and thus prevent attrition or breakage of said parts 25 adjacent to the king-bolt. The weight carried on the vehicle is supported at its front end entirely by the bolster. The passing over obstacles or into depressions by either the front or rear of the wagon and the de- 30 clines and inclines in the road results in a constantly-recurring series of longitudinal oscillations at the upper surface of the bolster. This results in breaking or wearing away the front and rear walls of the vertical hole 35 through the bolster and in the sand-board, when the bolster will no longer maintain its vertical position, but lean forward or backward, as the case may be. After the king-bolt hole at the point of contact of the bolster 40 and sand-board becomes enlarged, as aforesaid, and oblong, the oscillation therein of the king-bolt increases, and this play in turn augments the wear aforesaid, and the ultimate result is that the bolster and sand- 45 board become worn out and useless long before the residue of the wagon is perceptibly worn. To prevent this oscillation of the king-bolt at its initiative, and thereby preclude the wearing of the walls of the king-bolt hole 50 through the bolster and sand-board, is the object of our invention. We attain this object by the mechanism described herein and illus-

trated in the accompanying drawings, in which—

Figure 1 is a rear elevation of a bolster 55 and sand-board provided with our invention. Fig. 2 is a vertical cross-section thereof. Fig. 3 is a detail view of plate C.

Inasmuch as our invention has reference only to the method shown of seating said 60 bolster and king-bolt, and the residue of the vehicle can be of any of the well-known kinds, we do not deem it necessary to show or describe the vehicle farther than is necessary to make intelligible the construction, location, 65 and operation of our invention.

A is a bolster of any of the usual forms provided centrally with the vertical hole B for the passage of the king-bolt.

C is a metallic plate, having the central ver- 70 tical hole C' for the reception of the king-bolt.

D is the usual king-bolt, having a flat circular head D'.

In the upper surface of the bolster-plate C, and around the hole C' therein, is formed an 75 annular recess E, conformable to the head D' of the king-bolt D, so that when the king-bolt is inserted in the bolster A the upper end of said king-bolt will be in the same horizontal plane with the upper surface of the 80 bolster-plate C. An annular flange or sleeve F is projected downwardly from the plate C into the hole B. The flange F is formed at its upper end integral with the plate C, and is in effect a downward prolongation of the 85 hole C' in said plate. The plate C is sunk into the upper surface of the bolster A, so that the upper surface of said plate and that of the residue of the bolster are on the same plane. The plate C is fastened to the bolster 90 by being sunk, as aforesaid, and also by bolts or screws passed downwardly through the holes G, formed vertically near each end of said plate.

H is an underlying bolster-plate provided 95 centrally with king-bolt hole H', and also with the annular flange J, extending upward from plate H into the hole B in bolster A, and being in effect an upward prolongation of the hole H'. The plate H is sunk into the lower sur- 100 face of the bolster A, so as to be flush therewith, and is held in place thereby, and also by bolts or screws passed upward into said bolster through the holes K, formed verti-

cally in the plate H, near the ends thereof; or said plate can be merely bolted to the lower surface of said bolster.

The flange F of the upper plate C and the flange J of the under plate H can be of such length that their adjacent ends will meet about the center of the bolster around the king-bolt D, and thereby form a bushing for the hole B the entire length of the latter between the plates C and H.

L is a sand-board plate of substantially the same conformation and parts as the plate H, and is provided centrally with the king-bolt hole L' and the downwardly-extending annular flange M, projected into the king-bolt hole N, formed vertically in the sand-board O and forming the bushing or re-enforcement for the last-named hole. The sand-board plate L is sunk into the upper surface of the sand-board O, so as to be flush therewith, and is further held in place by bolts or screws suitably fastened to said sand-board through holes P, formed vertically in said plate L, near the ends thereof; or said plate L can be suitably bolted on the upper surface of sand-board O.

It results from the above construction that the upper and lower ends of the hole B in the bolster A and the upper end of the hole N in the sand-board O have a metallic re-enforcement integral with the contiguous plates, respectively, which entirely relieves the ends and walls of said holes from bruising or breaking or wearing by taking the strain and jar of the king-bolt therefrom, and thus preventing the initial oscillation aforesaid of the king-bolt at said localities. The same is true of the function and effect of the sand-board plate L, and as the flange M on the latter may be extended entirely through the sand-board O the entire upper portion of the king-bolt D is seated in an unyielding metallic sleeve integral with the adjacent plates, and rigidly held thereby from lateral or longitudinal oscillation, and the bolster is held continuously in a vertical position.

The plates C, H, and L and their adjunctive flanges may be made of wrought, malleable, or cast iron, are simple in construction, effective, and durable.

What we claim as our invention, and desire to secure by Letters Patent of the United States, is—

1. The combination of the bolster A, provided with central vertical opening B, plate C, countersunk in the said bolster flush with the upper side of the latter, and provided with central opening C' and downwardly-projecting annular flange F, integral with plate C, and with annular recess E, and plate H, provided with central opening H' and upwardly-projecting annular flange J, integral with said plate H, substantially as shown, and for the purpose described.

2. The combination of the bolster A, provided with central hole B, plate C, countersunk in the upper surface of said bolster flush with the latter, and provided with central opening C' and downwardly-projecting annular flange F, integral with plate C, and with annular recess E, the underlying plate H, provided with central opening H' and upwardly-projecting annular flange J, integral with said plate H, and the king-bolt D, provided with head D', substantially as shown, and for the purpose described.

3. In combination with the bolster A, provided with central hole B, plate C, countersunk in said bolster flush with the upper side thereof, and provided with central hole C' and downwardly-projecting annular flange F, integral with plate C, and provided with annular recess E, plate H, provided with central opening H' and upwardly-projecting annular flange J, integral with said plate H, sand-board O, provided with hole N, and plate L, provided with the opening L' and downwardly-projecting annular flange M, integral with said plate L, and the king-bolt D, provided with head D', substantially as shown, and for the purpose described.

In testimony whereof we affix our signatures in presence of two witnesses.

DAVID KELLEY.
JOHN J. COX.

Witnesses:

AMOS L. NORRIS,
R. V. CUMMING.