

(No Model.)

A. R. MUTERSPAUGH.  
KING BOLT SUPPORTER.

No. 422,821.

Patented Mar. 4, 1890

Fig. 1

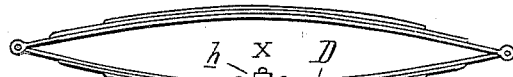


Fig. 2

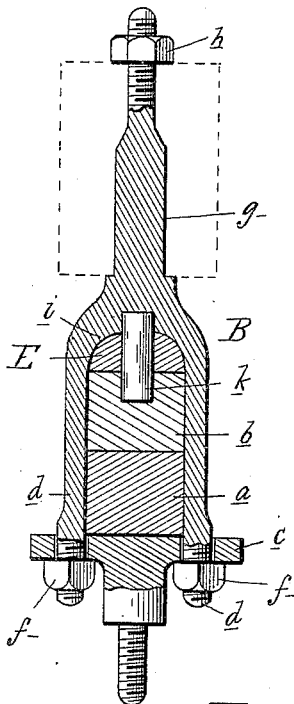
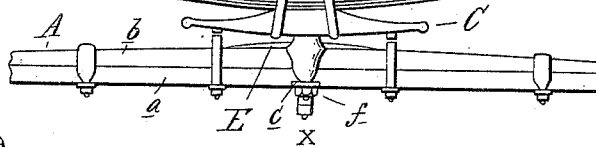


Fig. 3

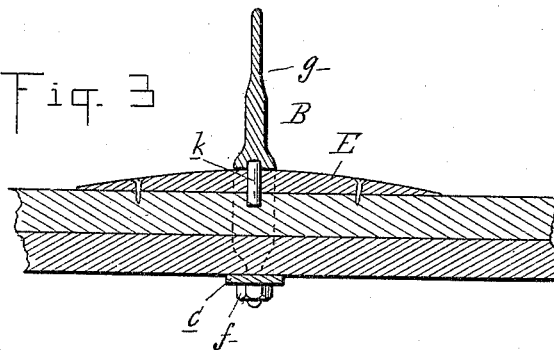


Fig. 4

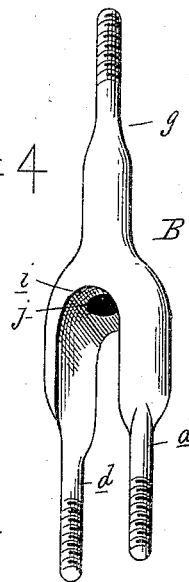
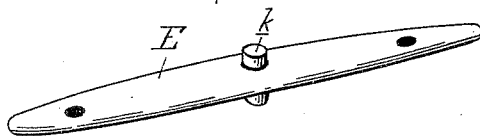


Fig. 5



Witnesses:  
P. M. Hulbert  
A. Hamilton

Inventor:  
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By Thos. S. Sprague, Son  
Atty.

# UNITED STATES PATENT OFFICE.

ANDREW R. MUTERSPAUGH, OF LEATON, ASSIGNOR OF TWO-THIRDS TO  
ARTHUR S. CONTANT AND EDGAR J. ADAMS, OF MOUNT PLEASANT  
MICHIGAN.

## KING-BOLT SUPPORTER.

SPECIFICATION forming part of Letters Patent No. 422,821, dated March 4, 1890.

Application filed August 7, 1889. Serial No. 320,026. (No model.)

*To all whom it may concern:*

Be it known that I, ANDREW R. MUTERS-  
PAUGH, a citizen of the United States, resid-  
ing at Leaton, in the county of Isabella and  
5 State of Michigan, have invented certain new  
and useful Improvements in King-Bolt Sup-  
porters, of which the following is a specifica-  
tion, reference being had therein to the ac-  
companying drawings.

10 This invention relates to new and useful  
improvements in king-bolts; and the inven-  
tion consists in the peculiar construction and  
arrangement of the king-bolt, a metal wear-  
ing-plate, and a pin arranged to enter the  
15 king-bolt and hold it from lateral displace-  
ment, all as more fully hereinafter described,  
and shown in the accompanying drawings, in  
which—

20 Figure 1 is a front elevation of a carriage-  
axle and connections embodying my improve-  
ment. Fig. 2 is a vertical central section on  
line X X with the cross-bar and spring re-  
moved. Fig. 3 is a section at right angles to  
Fig. 2. Fig. 4 is a perspective view of the  
25 bolt detached. Fig. 5 is a perspective view  
of the wearing-plate detached.

A is the axle, consisting of the metal part  
*a* and wooden part *b*, clipped together by the  
clip-plate *c*, through which the lower ends of  
30 the arms *d* of the king-bolt B pass, and held  
in position by the nuts *f*.

The upper end of the king-bolt forms a bolt  
*g*, passing through the cross-bar C and spring  
D, and is screw-threaded to receive the nut *h*.

35 King-bolts have heretofore been made as  
above described, and have proven quite un-  
satisfactory after a little use, because the  
king-bolt would wear loose and slip to one  
side or the other, disarranging the parts and  
40 wearing out the wooden part of the axle. To  
overcome these objections, I have interposed

the wearing-plate E under the arch *i* of the  
bifurcation of the king-bolt upon the wooden  
part of the axle and formed a recess *j* in the  
arch, a coincident aperture in the wearing- 45  
plate and in the axle, and in these place the  
pin *k*, which, when the parts are secured to-  
gether, forms a stop extending up into the  
king-bolt.

I am aware that king-bolts have been pro- 50  
vided with pins in the crotch of the clip, ex-  
tending down into and through a wearing-  
plate, as in the Patent No. 139,855; but this re-  
quires that the pin shall be cast therewith,  
and the pin projecting down between the legs 55  
of the clip makes it difficult to mold, as the  
sand is apt to stick where the parts of a pattern  
are as close together as they are in said pat-  
ent, and, moreover, it makes the parts diffi-  
cult to finish. I therefore deem it important 60  
that the pin be made separate from the king-  
bolt, for the reason above explained.

I deem it important that the pin enters the  
axle, for by this means the wearing-plate is  
prevented from moving endwise even if the 65  
screws used with it should become loose.

What I claim as my invention is—

The combination, with the axle of a vehi-  
cle, of a king-bolt embracing the axle with its  
lower bifurcations, clip-plate *c*, a wearing- 70  
plate on the axle, and a detached pin secured  
in said wearing-plate and entering recesses  
in the king-bolt and axle, substantially as de-  
scribed.

In testimony whereof I affix my signature, 75  
in presence of two witnesses, this 15th day of  
June, 1889.

ANDREW R. MUTERSPAUGH.

Witnesses:

C. C. WHITNEY,  
E. J. ADAMS.