

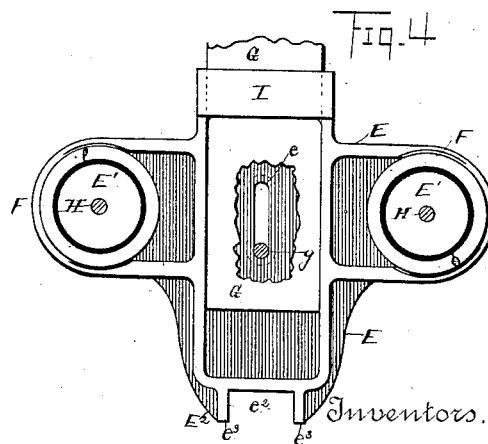
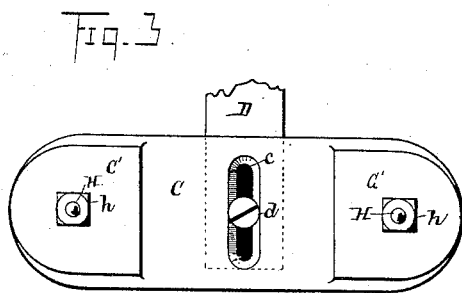
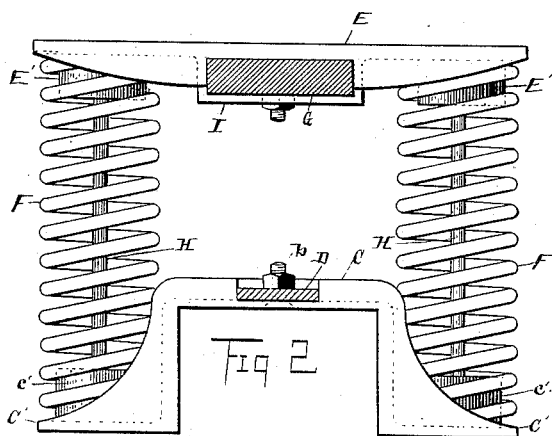
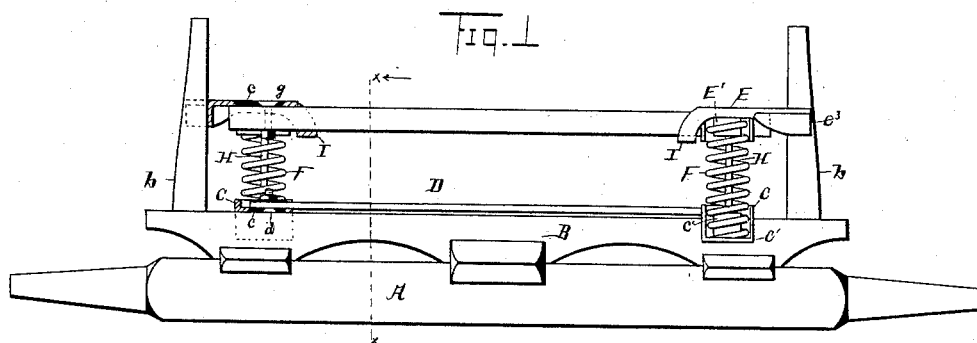
(No Model.)

G. H. JACKSON & J. HARVEY.

BOLSTER SPRING FOR VEHICLES.

No. 385,630.

Patented July 3, 1888.



Witnesses.

B. S. Lowrie.

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Garrett H. Jackson,

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By

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UNITED STATES PATENT OFFICE.

GARRETT H. JACKSON AND JOHN HARVEY, OF CLEVELAND, OHIO.

BOLSTER-SPRING FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 385,630, dated July 3, 1888.

Application filed September 21, 1887. Serial No. 250,366. (No model.)

To all whom it may concern:

Be it known that we, GARRETT H. JACKSON and JOHN HARVEY, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Vehicle-Springs for Bolsters; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

Our invention relates to improvements in vehicle-springs for bolsters; and it consists in certain features of construction and in combination of parts hereinafter described, and pointed out in the claims.

Heretofore—to wit, as shown in United States Patent No. 345,118, of July 6, 1886—the bolster-springs were inserted in pockets made at the end of the bolster-yoke. With such construction dirt, mud, or water would become packed or frozen in such pocket and render so much of the spring as extended into this pocket inoperative; also, the wooden tie-bars of the cap-plates were made to embrace the bolster-stakes, being notched at the respective ends for this purpose, and were therefore not adjustable in length to fit different widths of vehicles, and such wooden tie-bars were soon worn away by the iron facing of the bolster-stakes. To obviate these difficulties we have devised the improved construction illustrated in the accompanying drawings.

Figure 1 is a rear side elevation. Fig. 2 is an enlarged elevation in transverse section on line *x x*, Fig. 1. Fig. 3 is a bottom plan of a bolster-yoke. Fig. 4 is a bottom plan of a cap.

A represents the rear axle of the vehicle, and B the attached bolster, the latter being provided in the usual manner with stakes *b*. C are metal yokes adapted to rest on and extend down astride the bolster, these yokes being placed in position near the stakes. The yokes have outturned feet *C'*, that form seats for the springs F, and integral with the feet are upwardly-projecting lugs *c'*, adapted to fit inside the springs to hold the latter in place.

With such construction there is no pocket or depression to hold an accumulation of dirt, mud, or water. The spring therefore is operative throughout its entire length. The yokes at the center have each a transverse slot, *e*, with sloping or countersunk sides,

adapted to receive the heads of bolts *d*, that secure the yokes to tie-rods D. With such construction, by loosening these bolts, the yokes may be adjusted toward or from the stakes, the bolts meanwhile sliding along the slots to admit of such adjustment, after which by tightening the bolts the yokes are held rigid in their adjusted position.

The springs F are of the spiral variety shown, and on top of each pair of springs rests a metal cap, E, the cap being provided with depending hollow lugs *E'*, that fit inside the springs to hold the top end of the latter in place.

Each cap is provided with an outward extension, *E²*, which extension is provided at its extreme end with a notch, *e²*, adapted to receive the stake *b*. Ribs *e²* are formed on the under surface of the plate around the notch to increase the wearing-surface that comes in contact with the stake. Each cap has a countersunk slot, *e*, adapted to receive the head of bolt *g*, which secures the cap to the wooden tie-bar G, such arrangement admitting of adjusting the caps toward or from each other, according to the distance apart of the bolster-stakes. Bolts H pass through the cap and lug *E'*, and are rigidly secured to the cap, preferably by means of a driving fit, the heads of these bolts being countersunk flush with the top surface of the caps. The tie-bars G are rabbeted on top where they engage the caps, to bring the central portion of the tie-bar flush with the top surface of the caps, so that the wagon-box has a flat surface to rest on, such surface extending over the cap and tie-bar G. The lower ends of the bolts H pass loosely through holes in lugs *c'* and feet *C'* of the yoke, so that when the caps are depressed by compressing the spring the bolts H are thrust downward through the yokes. Bolts H are provided with nuts *h*, located below the yokes for giving the desired tension to the springs when the latter are not loaded, and to prevent too great a recoil of the springs in passing over rough roads. These bolts, being rigidly attached to the cap, serve also as steady-pins to hold the caps over the contiguous yokes.

A strap, I, is cast integral with cap E and extends inward some little distance under tie-bar G, to support the latter in case the central portion of the wagon-bottom should bear

heavily on this tie-bar, the strap I thus relieving the securing-bolt *g* from undue strain.

What we claim is—

1. The combination, with a bolster, a yoke,
5 cap, and springs yieldingly connecting the yoke and cap, said yoke and cap having slots therein, of tie-rods and bolts passing through the tie-rods and slots in the yoke and cap, whereby the latter are adjustable lengthwise
10 of the bolster, substantially as set forth.
2. The combination, with cap and tie-bar

adjustably secured to the cap, of strap I, for supporting such tie-bar, substantially as set forth.

In testimony whereof we sign this specification, in the presence of two witnesses, this 7th day of September, 1887.

GARRETT H. JACKSON.
JOHN HARVEY.

Witnesses:

CHAS. H. DORER,
ALBERT E. LYNCH.