(No Model.)

2 Sheets—Sheet 1.

S. C. BLAINE.

BOLSTER SPRING.

No. 315,382. Patented Apr. 7, 1885.

Fig. 1.

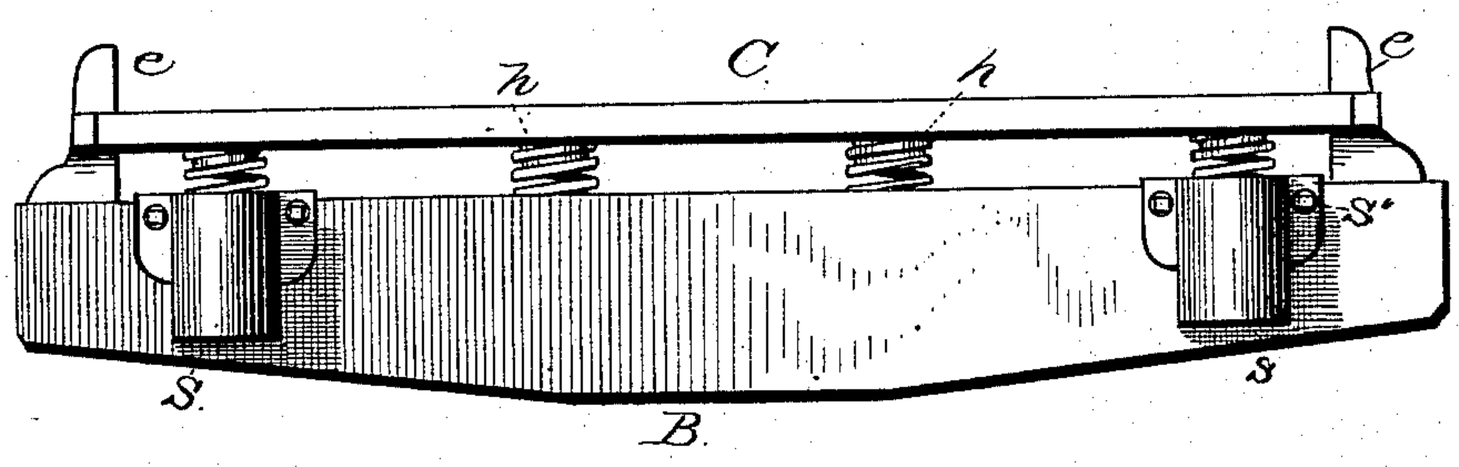


Fig. 2.

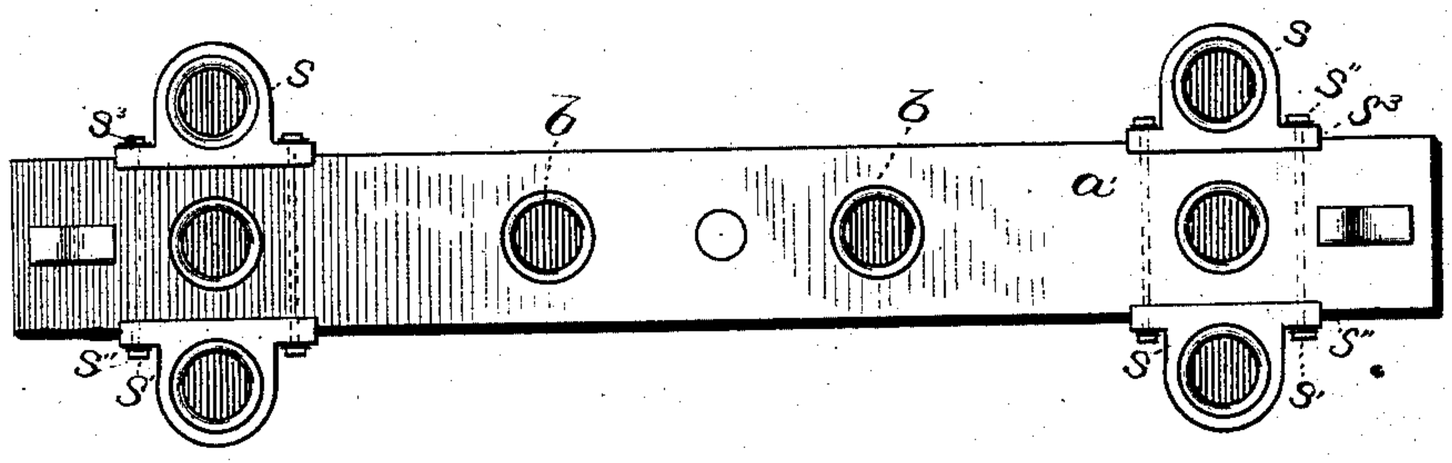
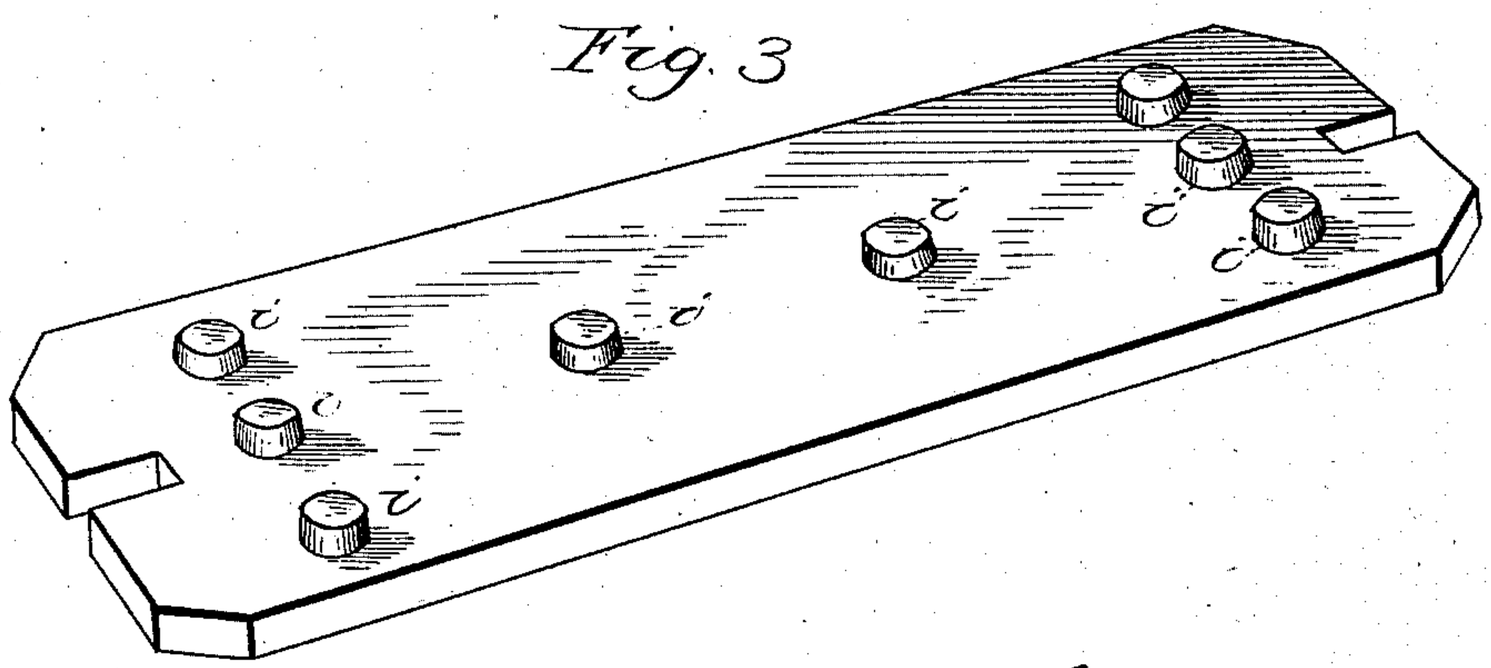


Fig. 3



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(No Model.) 2 Sheets—Sheet 2.

S. C. BLAINE.

BOLSTER SPRING.

No. 315,382. Patented Apr. 7, 1885.

Fig. 4.

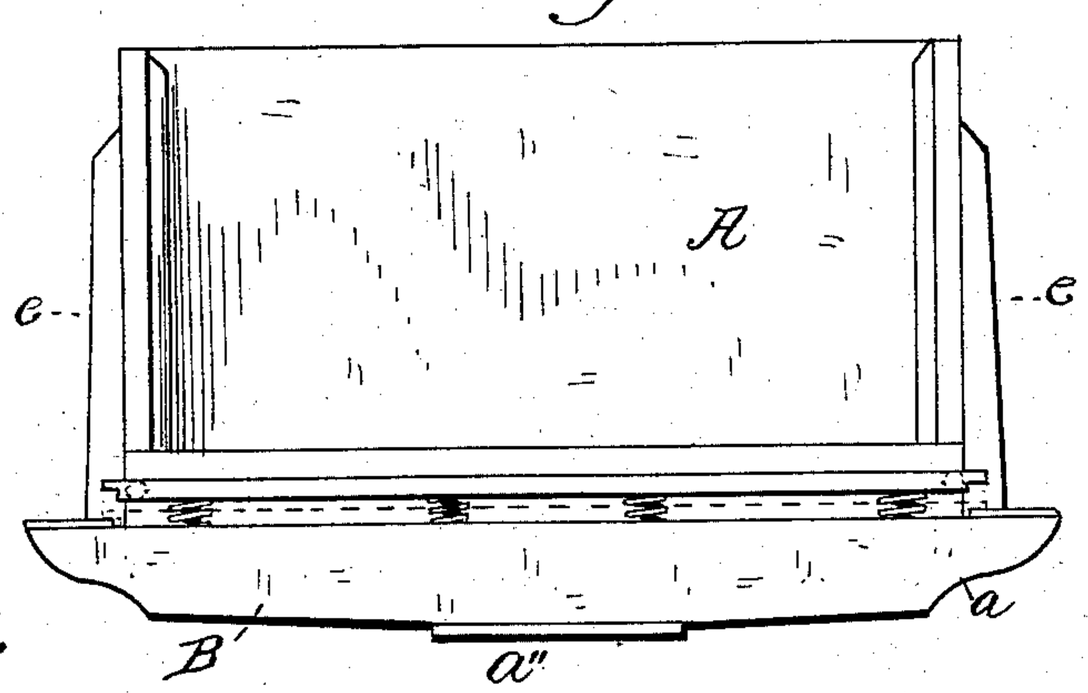


Fig. 6.

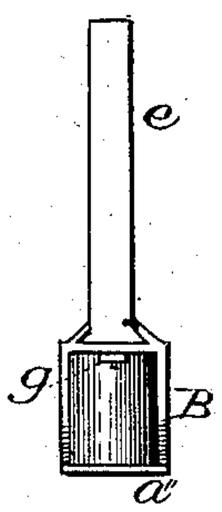


Fig. 5.

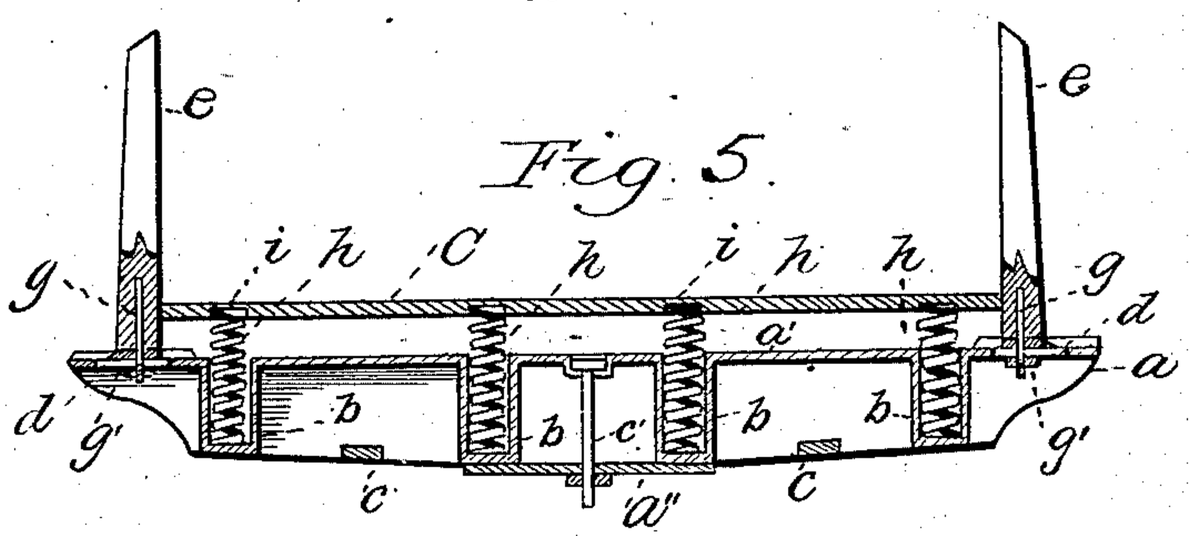


Fig. 7.

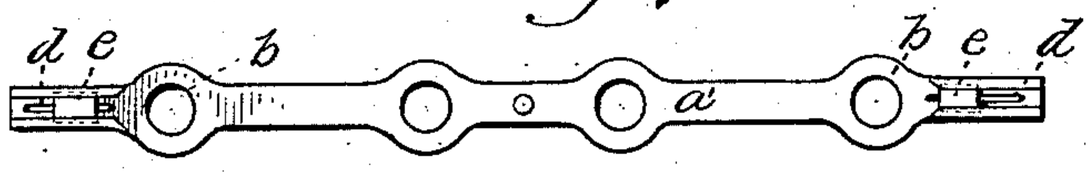


Fig. 8

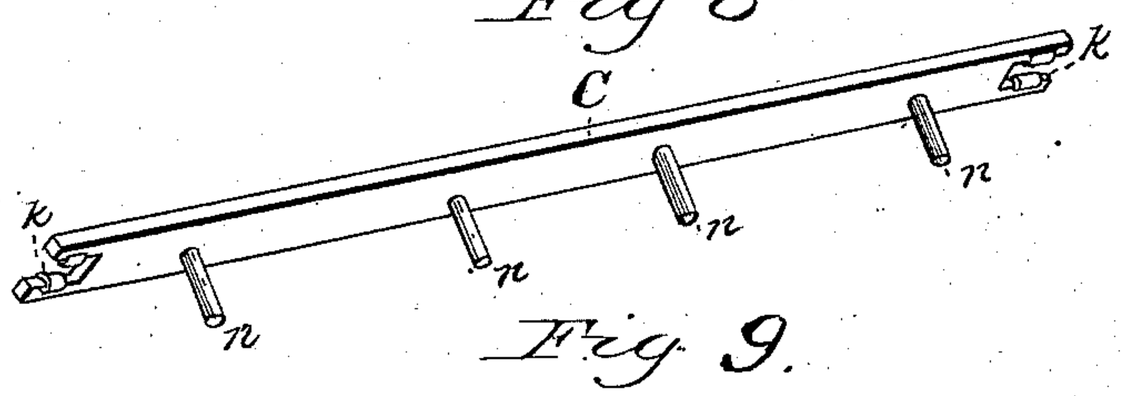
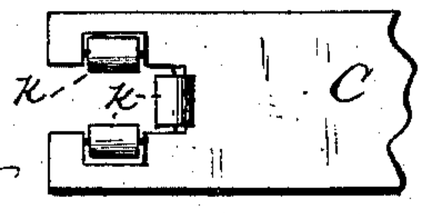


Fig. 9.



WITNESSES

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UNITED STATES PATENT OFFICE.

SARAH C. BLAINE, OF CHATTANOOGA, TENNESSEE.

BOLSTER-SPRING.

SPECIFICATION forming part of Letters Patent No. 315,382, dated April 7, 1885.

Application filed September 10, 1884 (No model.)

To all whom it may concern:

Be it known that I, SARAH C. BLAINE, of Chattanooga, in the county of Hamilton and State of Tennessee, have invented certain new and useful Improvements in Vehicle-Bolsters; and I do hereby declare that the following is a full, clear, and exact description of the invention, which 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, which form part of this specification.

This invention relates to that class of contrivances known as "bolsters," for giving elastic support to the bed of a wagon or other vehicle vertically between the laterally-supporting standards, its main object being the provision of wider bearing-surface for the sub-bolster, and consequently an increased elastic support to the wagon-bed, further objects being simplicity of construction and cheapness in cost as contrasted with many devices of like character at present in use.

The invention consists, substantially, in the parts as constructed, and in the particular combinations thereof, as will hereinafter be distinctly described, and pointed out in the claims.

Referring to the annexed sheets of drawings, Figure 1 represents a front elevation of my invention. Fig. 2 represents a top or plan view showing plainly the arrangement of the detachable spring cups or receptacles, by which is afforded an increased elastic support for the sub-bolster by which the wagon-bed is borne. Fig. 3 represents an inverted perspective view of the sub-bolster, to more clearly illustrate the construction. Fig. 4 represents a vertical front elevation of a wagon-body as supported upon a bolster constructed in accordance with my invention, such figure representing the non-employment of the spring cups or receptacles. Fig. 5 represents a sectional elevation of the bolster and sub-bolster, to more clearly indicate the construction of the former; and Fig. 6 is an end view thereof. Fig. 7 is a plan view of the bolster slightly modified in form, and Figs. 8 and 9 are views in detail.

Reference being had to the several parts by the letters marked thereon, A represents a wagon-body of ordinary form, and B a bolster constructed in accordance with my invention. This latter is formed of two sides, *a a*, united integrally by the top and bottom portions, *a' a''*, and the walls of hollow pockets or spring-receptacles *b*, the space between the sides intermediate of the pockets being void of any material. By this construction the bolster is rendered much lighter in weight, the result at the same time being a great saving in the amount of material employed in its construction.

Between the sides *a a*, at the outer side of the two inner pockets, *b*, are arranged rub-blocks *c*, for moving upon the fifth-wheel of the vehicle to prevent wear. They may be of any suitable material, but preferably of a kind having elastic properties.

Centrally of the top and bottom portions, *a' a''*, is provided an opening for the king-bolt C', by which the bolster is secured to the vehicle-axle.

In the top portion, *a'*, at the ends, is formed a slot, *d*, in which the standards *e e* are adjustably supported, they being held therein by a pin, *g*, and nut *g'*, as shown. The pockets *b* are for the reception of coiled springs *h*, upon which the sub-bolster or follower C rests and is supported.

The sub-bolster is formed on its under surface with projecting pins *i*, to be received into the upper coils or ends of the springs. By this construction the springs are prevented from sidewise displacement at their upper ends. Instead of the pins, however, I may form circular recesses in the under surface of the sub-bolster to receive the upper convolution of the springs, or provide circular flanges therein. (See Figs. 3 and 5.) The ends of the said sub-bolster are recessed or slotted out, as shown, by which they are made to embrace the sides of the standards, and for the purpose of lessening noise and wear by friction I have journaled in each of the sides of such recesses a small roller, *k*. (See detail, Fig. 9.) These rollers are preferably of hard rubber, but may be of any desirable material.

For the purpose of increasing the elastic bearing-surface of the vehicle-body when resting on the sub-bolster, I provide at the sides of the bolster, preferably at or near the ends, detachable cups or receptacles *s*, which are arranged directly opposite each other, and are

secured by bolts *s'*, passing entirely through the bolster and secured by nuts *s''*. (See Figs. 1 and 2.) These cups are formed with upper flanges, s^3, which rest upon the upper edge of the bolster, as shown, and tend to prevent sidewise displacement due to weight carried by the vehicle. They are readily removable, when desired, to replace them by others, and are for the reception of bearing-springs, the same as are the pockets *b*. In conformity to this construction the sub-bolster is formed with corresponding pins, flanges, or recesses, *i*, and is preferably made throughout of width equal to the bolster and cups when the latter are attached.

In Fig. 7 is represented the form of construction of bolster when made solid throughout, with the exception of the pockets, and when made of wood, as is preferred by me in some instances, the form previously described being preferably of malleable iron. In this figure the walls of the pockets *b* are set out from the main body of the bolster, as shown, in order to compensate in strength for the material lost in the formation of the pockets.

It will be understood that in providing the pins *i* on the under side of the sub-bolster they are to be short enough to allow full play of the springs in yielding between the wagon bed and bolster.

In operation the wagon-bed is supported most easily upon the sub-bolster, which latter is also assisted in moving more freely and with less friction by the action of rollers *k*.

The standards are adjustable, and should one or both of them become worn or injured it can be readily removed and replaced by another.

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

1. In wagons or other vehicles, the combination of a bolster formed with the top and bottom portions, *a' a''*, sides *a a*, and inner pockets, *b*, the parts being united integrally, springs resting in said pockets, and the sub-bolster formed or provided on its under surface with pins or recesses for engaging the upper ends of the springs, substantially as described.

2. In wagons or other vehicles, the combination of a bolster formed at its ends with an elongated slot, and having the pockets *b* and springs *h*, the standards *e*, adjustable in said slots, and provided with nuts by which they are secured, and a sub-bolster formed at its ends to embrace the standards, and friction-rolls which bear against the sides of said standards, substantially as described.

3. The combination, with a wagon-bolster and standards, of a sub-bolster formed at its ends to embrace the standards, and having friction-rollers journaled therein, substantially as and for the purpose described.

4. In wagons or other vehicles, the combination, with a bolster formed of two sides having between them integral spring-bearing cups or receptacles, of detachable spring-bearing cups or pockets secured to opposite sides thereof, and bolts for securing said pockets, passing through the sides of the bolster, and serving in addition to strengthen the parts, substantially as described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

SARAH C. BLAINE.

Witnesses:
O. E. DUFFY,
OTTO FISCHER.