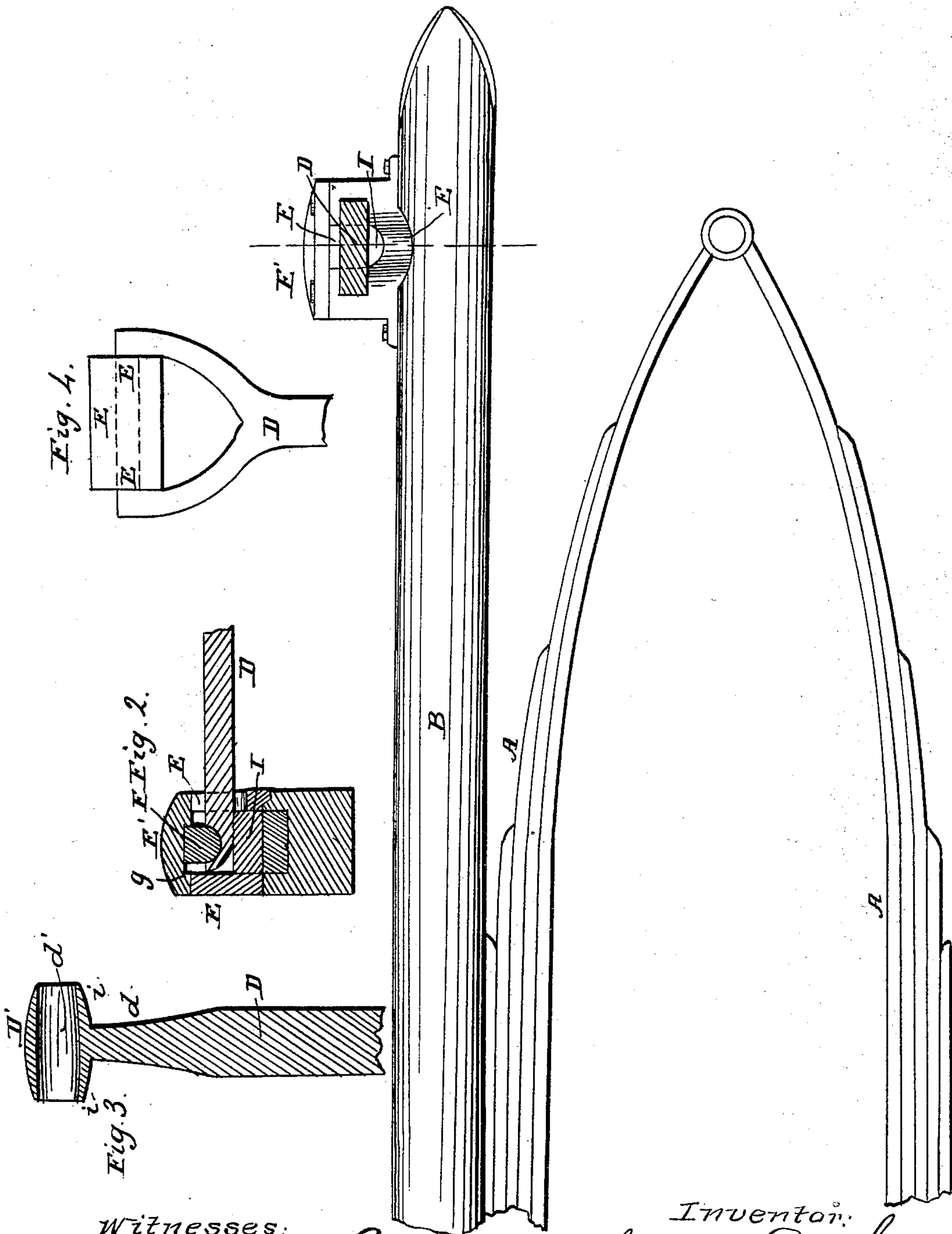


J. D. SARVEN.

Elastic Bearing for the Body Supporting Irons for Carriages.

No. 74,012.

Patented Feb. 4, 1868.



Witnesses:

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United States Patent Office.

JAMES D. SARVEN, OF COLUMBIA, TENNESSEE.

Letters Patent No. 74,012, dated February 4, 1868.

IMPROVEMENT IN ELASTIC BEARING FOR THE BODY-SUPPORTING IRONS FOR CARRIAGES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JAMES D. SARVEN, of Columbia, in the county of Maury, and State of Tennessee, have invented a new and improved Elastic Bearing for the Body-Supporting Irons of Carriages; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, and in which—

Figure 1 is a vertical elevation of my invention, as seen from a point between the axles.

Figure 2 is a vertical section of the box E and iron, D.

Figure 3 is a top view of the iron, D.

Figure 4 is a top view of the iron, D, showing a different form of the iron.

In this invention, the irons by which the carriage-body, at its corners, is attached to the cross-bars that rest upon the carriage-springs, are supported by elastic bearings, in the end of the cross-bars.

In order that others skilled in the art to which my invention appertains may be enabled to make and use the same, I will proceed to describe it in detail.

In the drawings, A A represent the springs upon which the carriage rests; B is the cross-bar attached to the under side of the carriage-body, and resting upon the springs A A; D is the loop or iron which connects each corner of the carriage-body to one end of a cross-bar, B; and E is the point where the loop D joins the cross-bar B, at which an elastic bearing, hereafter to be described, is attached to the cross-bar, and supports the end of the loop or iron, D. At this point a box, E, is attached to the cross-bar B, for the reception of the end of the iron, D. If the iron, D, is made in the shape shown in fig. 3, the box E will be provided with a vertical slot, *e*, in the side next to the carriage-body; but the iron, D, may be made in the form of a loop, stirrup, or isosceles triangle, in which case the box E must have two slots, one on the side next to the wheel, and one on the inside, opposite to the former.

The box E may be cast in one piece or two. If cast without a bottom, it may be cast in one piece, but when a bottom is cast on the box, the top or cover *e'* must be made removable, and be fastened to the body of the box by screws or other suitable fastening. At the bottom of the box, on its inside, is a cushion, I, of India rubber, gutta percha, or other elastic substance, its top rising somewhat above the bottom of the slot *e*. Where the box has a bottom cast on it, the cushion will rest on that bottom, but where it has not, the cushion will rest directly on the cross-bar. A suitable bed may be excavated to receive the cushion, if thought best.

I would in general make the iron, D, in the form shown in fig. 3, having its extremity shaped into a head, D', which rests upon the cushion I, the neck *d* of the iron working in the slot *e*, and the shoulders *i i* projecting beyond the walls of the slot inside of the box, and preventing the iron from being withdrawn from the box, except by removing the cover *e'*, or, where the cover is not removable, by removing the box itself from the cross-bar. The under side of the head D' is rounded, so as to admit of its rocking easily upon the cushion I; but the iron, as above remarked, may be in the form of a loop or stirrup, and rest on the cushion I, as shown in fig. 4. A second elastic cushion, F, is attached to the upper side of the head D', extending across from side to side. It will be more firmly attached if the upper side of the head D' is provided with a transverse groove or notch, *d'*. It should be made of sufficient size and thickness to fill the groove *d'*, and a similar groove or recess, *g*, in the under side of the cover *e'*, and to prevent the upper side of the iron, D, from coming in contact with the under side of the box-cover. Cushions may be placed around the sides of the head D', between it and the walls of the box E, if desired, in order to prevent any rattling or jar of the supporting-iron in the box.

In a carriage provided with this attachment, the iron, D, which is a stout, inflexible piece of metal, always maintaining a nearly horizontal position, rests between the lower cushion I and the upper cushion F, and has a vertical motion in the slot *e*. These cushions are not intended to serve as carriage-springs, the latter being shown at A A, but they are designed to assist the carriage-springs in overcoming all jarring and harsh motion. They are peculiarly adapted to giving the carriage a smooth, easy motion, when it is not loaded heavily enough to bring the main springs A A into full operation.

It will be observed that the form of the iron, D, when used in connection with the enclosing-box E, is such as to attach the carriage-body securely to the cross-bar without the help of bolts, screws, &c. The effect of the whole arrangement is that no jar, however slight, can take place which will not be taken up on the elastic

cushions, while the heavier plunges of the carriage are relieved by the stout rigid springs attached below the cross-bar, and thus the carriage will ride with as little jar when entirely empty as when heavily loaded.

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

1. The supporting-iron D, having the neck *d* and the head D', as and for the purpose specified.
2. The combination of the springs A A, one or both, cushions I F, and cross-bars B, substantially as and for the purpose described.
3. The combination and arrangement of the box E with the enclosed cushions I F, substantially as and for the purpose specified.

To the above specification of my improvement I have signed my hand, this 18th day of June, 1867.

JAMES D. SARVEN.

Witnesses:

L. HILL,

CHAS. A. PETTIT.