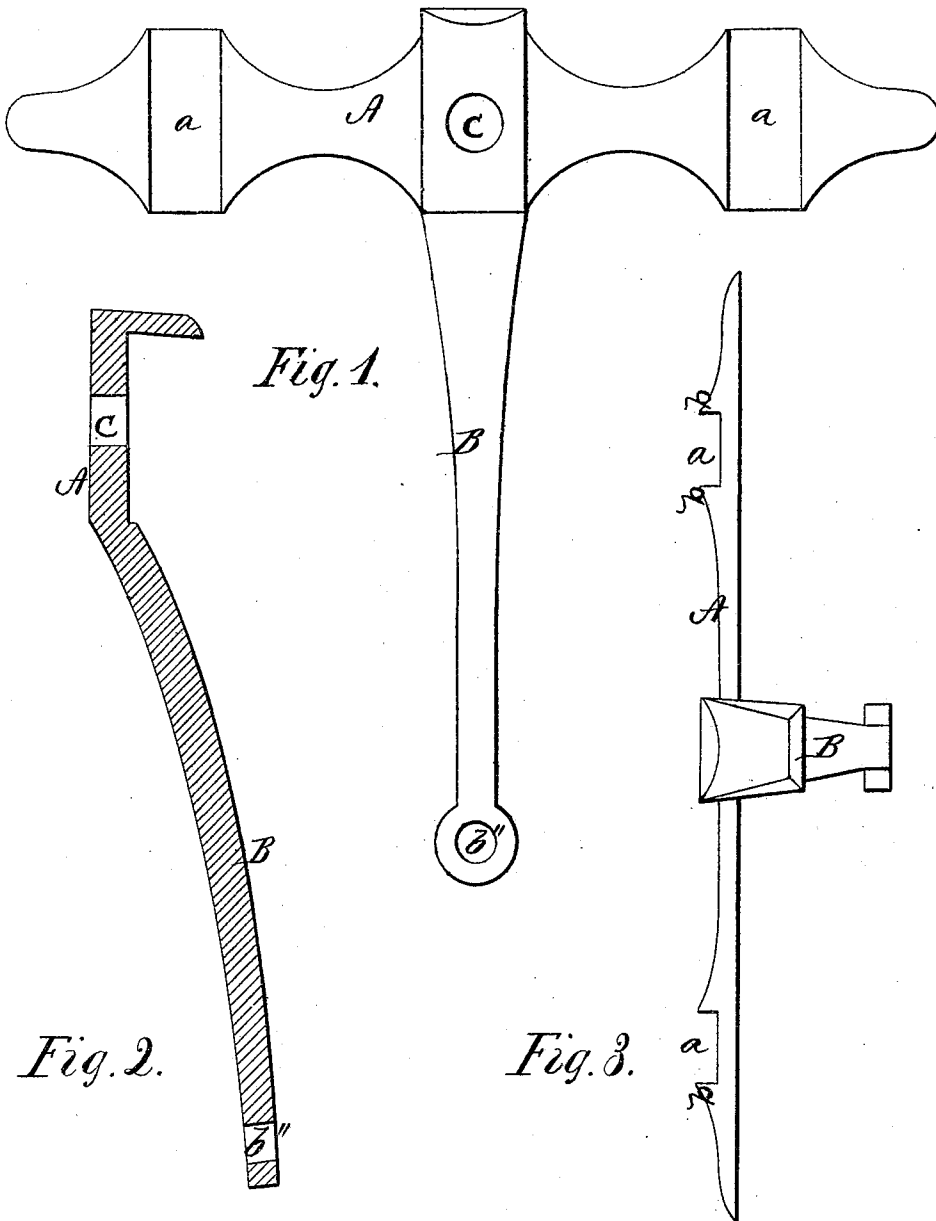


N. C. DEAN.
Spring Clip-Plates.

No. 150,297.

Patented April 28, 1874.



Witnesses.
George E. Upham.
Emory H. Bates.

Inventor.
Norman C. Dean.
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Attorneys.

UNITED STATES PATENT OFFICE.

NORMAN C. DEAN, OF UNION SPRINGS, NEW YORK, ASSIGNOR OF ONE-HALF HIS RIGHT TO SILAS S. BLISS, OF SAME PLACE.

IMPROVEMENT IN SPRING CLIP-PLATES.

Specification forming part of Letters Patent No. **150,297**, dated April 28, 1874; application filed August 9, 1873.

To all whom it may concern:

Be it known that I, NORMAN C. DEAN, of Union Springs, in the county of Cayuga and State of New York, have invented a new and valuable Improvement in Spring Clip-Plates; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a top view of my spring clip-plate. Fig. 2 is a sectional view of the same. Fig. 3 is a back view of the same.

My present invention is intended as an improvement upon the spring clip-plate for which Letters Patent No. 134,859 were granted to me June 14, 1873, and the reissue of which is dated July 15, 1873, No. 5,490; and the invention consists in the construction and arrangement of the clip-plate formed in one piece, as will be hereinafter described and claimed.

Like letters of reference indicate corresponding parts.

A represents the clip-plate to be placed on top of the lower half of an elliptic carriage-spring, and provided with transverse grooves or recesses *a*, one near each end, in which the clips rest that fasten the plate to the spring

bounded or embraced by the flanges *b b*. This plate is also provided with a hole, *c*, through the center to receive a bolt, which secures it to the axle. From the center of the plate A extends a brace, B, forward if the plate is on the hind spring, and toward the rear if the plate is on the front spring. This brace is slightly curved, as shown in Fig. 2, and bends downward, so that its front end will rest upon the reach of the wagon, to which it is to be secured by a bolt through a hole, *b''*, in the end of the brace. By means of this brace the spring is steadied on the axle, and prevented from wobbling either forward or backward.

I disclaim the device shown in the patent granted to John H. Deal, dated July 23, 1867.

What I claim as new, and desire to secure by Letters Patent, is—

The clip-plate A and brace B, formed in one piece, with the transverse grooves *a*, flanges *b*, and center hole *c*, as shown, and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

NORMAN C. DEAN.

Witnesses:

G. P. WOOD,
ETSEL WOOD,
NOYES S. COLLINS.