

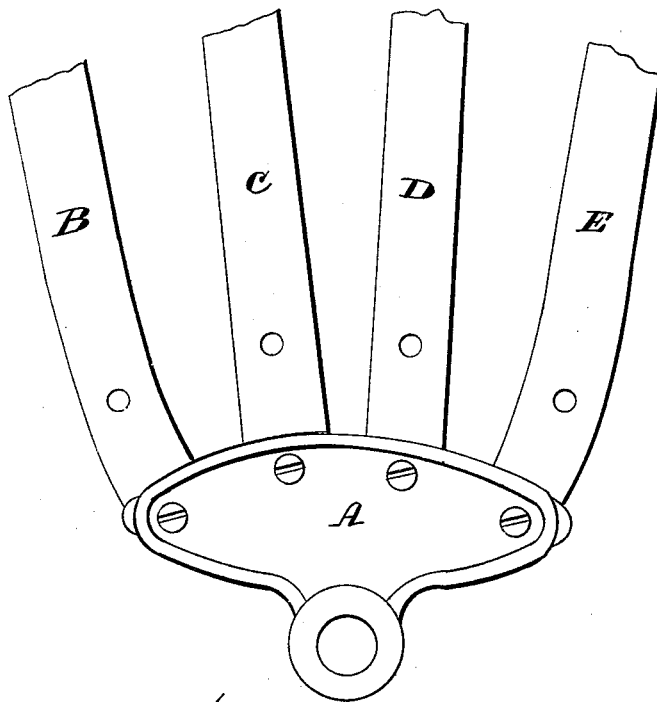
H. M. BIDWELL.

Carriage-Joint.

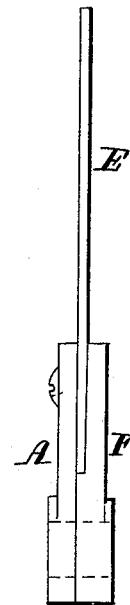
No. 52,016.

Patented Jan. 16, 1866.

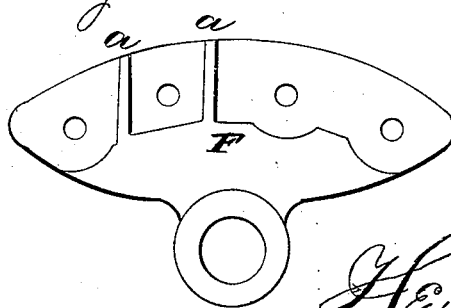
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



*Witnesses*  
*John H. Shumway*  
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# UNITED STATES PATENT OFFICE.

H. M. BIDWELL, OF NEW HAVEN, CONNECTICUT.

## IMPROVEMENT IN BOW-IRONS FOR CARRIAGES.

Specification forming part of Letters Patent No. 52,016, dated January 16, 1866.

*To all whom it may concern:*

Be it known that I, HENRY M. BIDWELL, of New Haven, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Bow-Irons for Carriages; and I do hereby declare the following, when taken in connection with the accompanying drawings, and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a side view; Fig. 2, an edge view, and in Fig. 3 the plate or joint divided.

My invention relates to an improvement in the construction of that part of a carriage-top called the "bow-iron," or the joint to which the several bows are secured. Heretofore these have been formed from wrought or malleable iron, jointed each to another, and one forming the joint for connection to the carriage, which construction requires no small amount of labor to fit them together for the attachment to the carriage. By my invention each bow is independent of the others, and the labor required is much reduced, the iron much better, and produced at a much less cost than as heretofore constructed.

To enable others to construct and use my improvement, I will proceed to describe the same as illustrated in the accompanying drawings.

A is the plate to which the several branches B, C, D, and E are attached. I prefer to form it in two parts, A and F. (See Fig. 2.) Into one part, F, as seen in Fig. 3, I form recesses to receive the several bows, so that when the two parts of the plate are fitted together, as in Fig. 2, there will be a groove left in the upper edge of the plate corresponding to the thickness of the irons to be placed therein, and drilled through the two parts of the plate, as seen in Fig. 3, to receive the rivets which are

to secure the branches B, C, D, and E. The said branches I form from stout hoop-iron cut to the proper length and drilled at their lower ends to correspond with the holes in the plate A, making other holes through the branches by which to secure the bows to the branches in the usual manner. I then insert the several branches into the plate in their respective places, inserting the rivet or screw through the plate and branches to secure the branches to the plate, so as to form a hinge-joint.

It is necessary that one of the bows or branches should be made fast to the plate. For this purpose I form a rib, *a*, each side of one of the bows C, as seen in Fig. 3. The lower end of the plate A forms the joint by which to attach the iron to the carriage.

Thus formed and applied to its use, each of the branches attached to its own bow, the top of the carriage may be opened or closed in the usual manner, and the iron thus constructed will not so soon become loosened in its joints as by the ordinary construction, and is much more simple, cheaper, and better.

I have described my invention as for four bows, one of which is made fast in the plate. The number of bows or branches may be varied as occasion requires, and more or less fixed rigidly in the plate.

I have described the plate as constructed in two parts. This is not essential, as the plate may be cast in one piece, and the upper edge cored to receive the branches.

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

The bow-iron constructed substantially in the manner as herein set forth.

H. M. BIDWELL.

Witnesses:

JOHN E. EARLE,  
JOHN H. SHUMWAY.