F. H. NIEMANN.
Carriage-Bow.

No. 212,491. Patented Feb. 18, 1879.

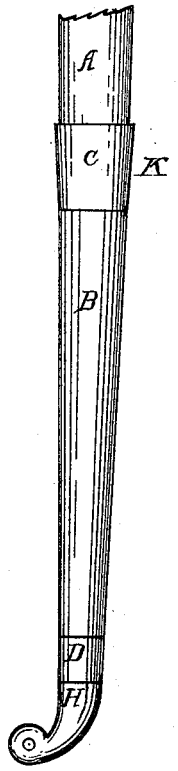

Fig. 1.

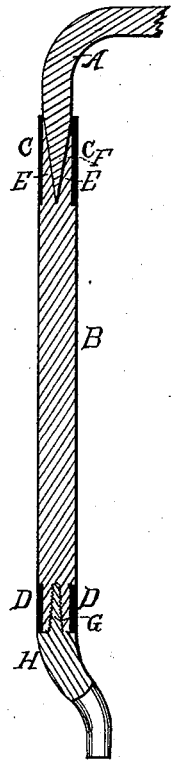

Fig. 2.

Attest.

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UNITED STATES PATENT OFFICE.

FRANZ H. NIEMANN, OF CINCINNATI, OHIO, ASSIGNOR TO FRANK C. ALBRECHT AND CHARLES H. ALBRECHT, OF SAME PLACE, ONE-THIRD TO EACH.

IMPROVEMENT IN CARRIAGE-BOWS.

Specification forming part of Letters Patent No. **212,491**, dated February 18, 1879; application filed March 12, 1878.

To all whom it may concern:

Be it known that I, FRANZ HENRY NIEMANN, of the city of Cincinnati, county of Hamilton, and State of Ohio, have invented certain new and useful Improvements in Carriage-Bows, of which the following is a specification:

My invention relates to a new and useful and economical mode of uniting the top and upright portions of a wooden bow; and consists in a peculiar wedge-shaped joint, protected and supported by a ferrule-covering. This joint allows of a handsome finish, and also allows the junction or the separation of the top from the upright portion of the bow to be easily and quickly accomplished. This advantage is especially apparent in the first construction of the carriage, and in the subsequent repairs of the bows.

In the annexed drawings, Figure 1 is a view of my new bow. Fig. 2 is a vertical section of my new bow.

A is the upper half of my bow. B is the lower half of the same, both being made of wood. The upper half is bent over, as shown in Fig. 2. The two halves or portions of the bow are joined together at K by a peculiar joint. The upper half, A, is made like a V-shaped wedge at F. The lower half, B, of the bow is correspondingly grooved at E E, to receive the wedge-shaped end F of the upper half of the bow.

In order to hold the two parts A and B firmly in place, and to make the joint more perfect, the two portions of the bow at their point of junction are provided with a ferrule, C.

In order to connect the two portions of the bow, this ferrule C is slipped over the upper end of B, and the wedge-shaped point F of A is then inserted into the ferrule and pressed home into the grooved end of B.

The two portions A and B are easily pressed home, and then all additional pressure serves to more firmly press the wedge-shaped point F into the corresponding groove, thereby pushing the points E E apart and against the walls of the ferrule C, rendering the joint exceedingly tight and secure, the only limit to the tightness being the strength of the ferrule to withstand the inside pressure.

Ferrule C is preferably of the same diameter as the upper end of upright part B of the bow; and the portion B is reduced at the place where the ferrule is to embrace it sufficiently to cause the outer surface of the ferrule, when placed on part B, to be flush with the surface of the latter, thereby giving a better finish to the joint.

The method of attaching the lower end of the portion A of the bow to the finger-iron or to the vehicle may be varied at pleasure; but a very desirable method of connecting the same is as follows, viz: The finger-iron H is provided with an extension, G, on which is cut a screw-thread. This extension screws into the wooden part B of the bow, and the joint or point of connection is protected by a ferrule, D D, which is preferably sunken upon B and made flush therewith.

The finger-iron may, when preferred, be attached to the end of the bow by means other than the screw—as, for example, by rivets, &c.; but I prefer to employ a screw upon the end of the finger-iron, as set forth.

The peculiar joint at K renders the construction of the bow a simple and cheap operation, and allows the parts to be easily adjusted or replaced when injured or destroyed.

When preferred, the groove may be formed in portion A, and the tongue in portion B, without taking the same out of the scope of my invention.

What I claim as my invention is—

1. The portion B of the wooden bow, having the tapering slot E of the same width as the bow, in combination with the bow A, provided with tongue F, the surface of portion A and B being incased by ferrule C, not only at the junction of the groove and tongue, but for a considerable distance above and below the latter, substantially as and for the purposes specified.

2. A carriage-bow consisting of the portion B, in combination with ferrule C and portion A F, and with ferrule D and finger-iron H G, substantially as and for the purposes specified.

FRANZ HENRY NIEMANN.

Attest:

W. S. CHRISTOPHER,
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