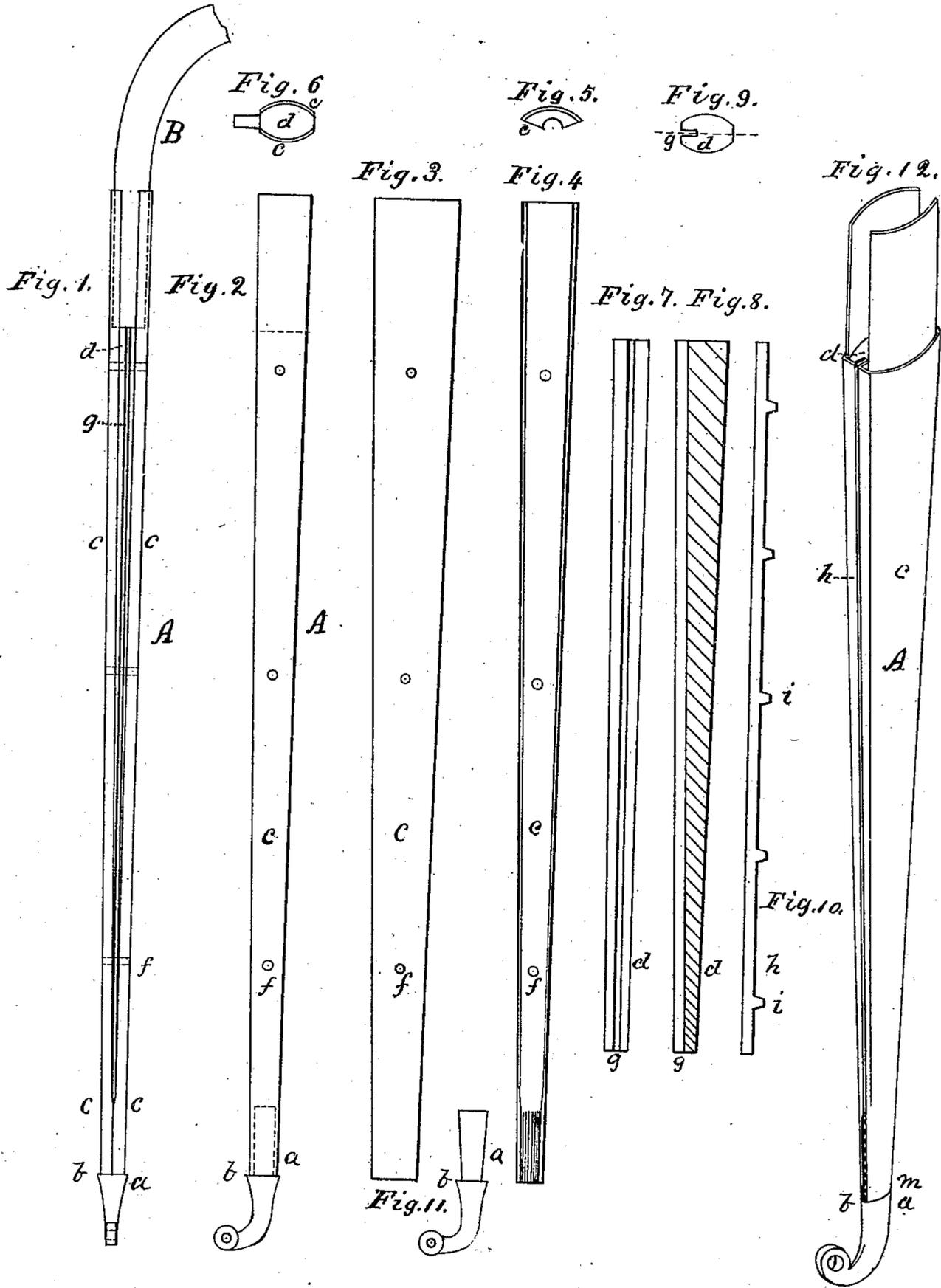


(No Model.)

H. F. WILLSON.  
Carriage Bow.

No. 237,713.

Patented Feb. 15, 1881.



Witnesses,  
W. L. Jay  
Jm H. Tucker

Inventor,  
H. F. Willson.

# UNITED STATES PATENT OFFICE.

HENRY F. WILLSON, OF ELYRIA, OHIO, ASSIGNOR OF ONE-HALF TO W. L. FAY, OF SAME PLACE.

## CARRIAGE-BOW.

SPECIFICATION forming part of Letters Patent No. 237,713, dated February 15, 1881.

Application filed December 24, 1880. (No model.)

To all whom it may concern:

Be it known that I, HENRY F. WILLSON, a citizen of the United States, residing at Elyria, in the county of Lorain and State of Ohio, have  
5 invented certain new and useful Improvements in Carriage-Bows; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make  
10 and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to carriage-bows; and it consists in a bow of the character and construction hereinafter specified and claimed.

In the drawings, Figure 1 is a front elevation of a detached portion of the bow, showing my improvements without covering. Fig. 2 is a side elevation of the same, also without covering. Fig. 3 is a side elevation of one of the  
20 metallic sides before being formed or struck up. Fig. 4 is a side elevation of the same after being struck up. Fig. 5 is a plan view from Fig. 4. Fig. 6 is a plan view from Fig. 2. Fig. 7 is an edge view of the wooden filling. Fig. 8 is a vertical section in dotted line *x x*, Fig. 9. Fig. 9 is a plan view from Fig. 8. Fig. 10 is a side elevation of the metallic strip used for fastening the leather or cover to the bow.  
30 Fig. 11 is a side elevation of the shank upon which the side plates are secured. Fig. 12 is a perspective view, complete, of the upright section of the bow.

Similar letters refer to similar parts throughout the several views.

A represents the upright or vertical portion of the bow.

B represents a broken portion of the curved part of the bow, the lower extremities of which  
40 are fitted to and secured to the upper portion of the upright section by riveting or other suitable device.

The upright portion of the bow is that part which embraces my improvements; and it consists of a shank, *a*, the lower portion of which is so curved as will facilitate its attachment to carriages in any of the various methods in use.

*b* represents a shoulder, which should be of a depth equal to the thickness of the side

plates and their covering. Above the shoulder said shank extends upward about two inches, and is made tapering, so as to correspond with the taper of the side sections, it being larger at its upper end than at the shoulder *b*, as seen in Fig. 11. To said shank are  
55 welded two side pieces, *c c*, which are formed or struck up from narrow tapering strips of sheet-steel or other suitable material. (See Figs. 3, 4, and 5.) The first shows the blank, the second the finished side ready to secure to  
60 the shank, and the last a plan view of same. I place two of these strips with their sides together and insert the tapering shank and weld or fasten them solid. Filler *d*, made of wood and of suitable form to fit into the cavity between the plates or sides *c c*, is then driven in,  
65 and strong rivets *f* are inserted and clinched through the whole, rendering the section extremely rigid and compact and presenting the appearance seen in Figs. 1 and 2. The next  
70 operation is that of covering the bow, which is done either with leather or other suitable material. The covering is cut the exact size and shape, and is folded around the bow so that its edges coincide with the groove *g* in the  
75 filler *d*. They are then introduced into the groove, which they partially fill up. I then insert between the said edges of the leather, within the groove, a thin metallic strip, *h*, cut in the form seen in Fig. 10, and force it in  
80 until its outer edge is flush with the surface of the leather on either side. Said strip should be thick enough to strongly press the leather on its sides, and thus, in passing into the groove, create a considerable degree of tension  
85 thereon, which serves to draw the leather as snugly around the bow as is desirable, or as the material will admit. Said strip *h* is at intervals along its inner edge provided with projections *i*, which insert themselves into the wood  
90 at the bottom of the groove, for the purpose of securing said strip in position. That portion of the covering which extends below the lower end of the groove *g* is to be stitched down the shank in line with the groove to the shoulder  
95 *b*, where the covering terminates, as seen in Fig. 12 at *m*.

I am aware that tubular sockets have been

welded to shanks or slat-irons, and I lay no claim thereto.

What I claim as new is—

1. The shank *a*, the metallic side pieces, *cc*,  
5 welded thereto, and filler *d*, each being constructed in the manner and for the purpose substantially as described.

2. The combination of the grooved filler *d* with the metallic strips *h*, for fastening the

covering to a carriage-bow, substantially as is described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

H. F. WILLSON.

Witnesses:

WM. H. TUCKER,  
W. L. FAY.