

(No Model.)

B. J. WARDEN.
Carriage Bow.

No. 230,372.

Patented July 20, 1880.

Fig. 1.

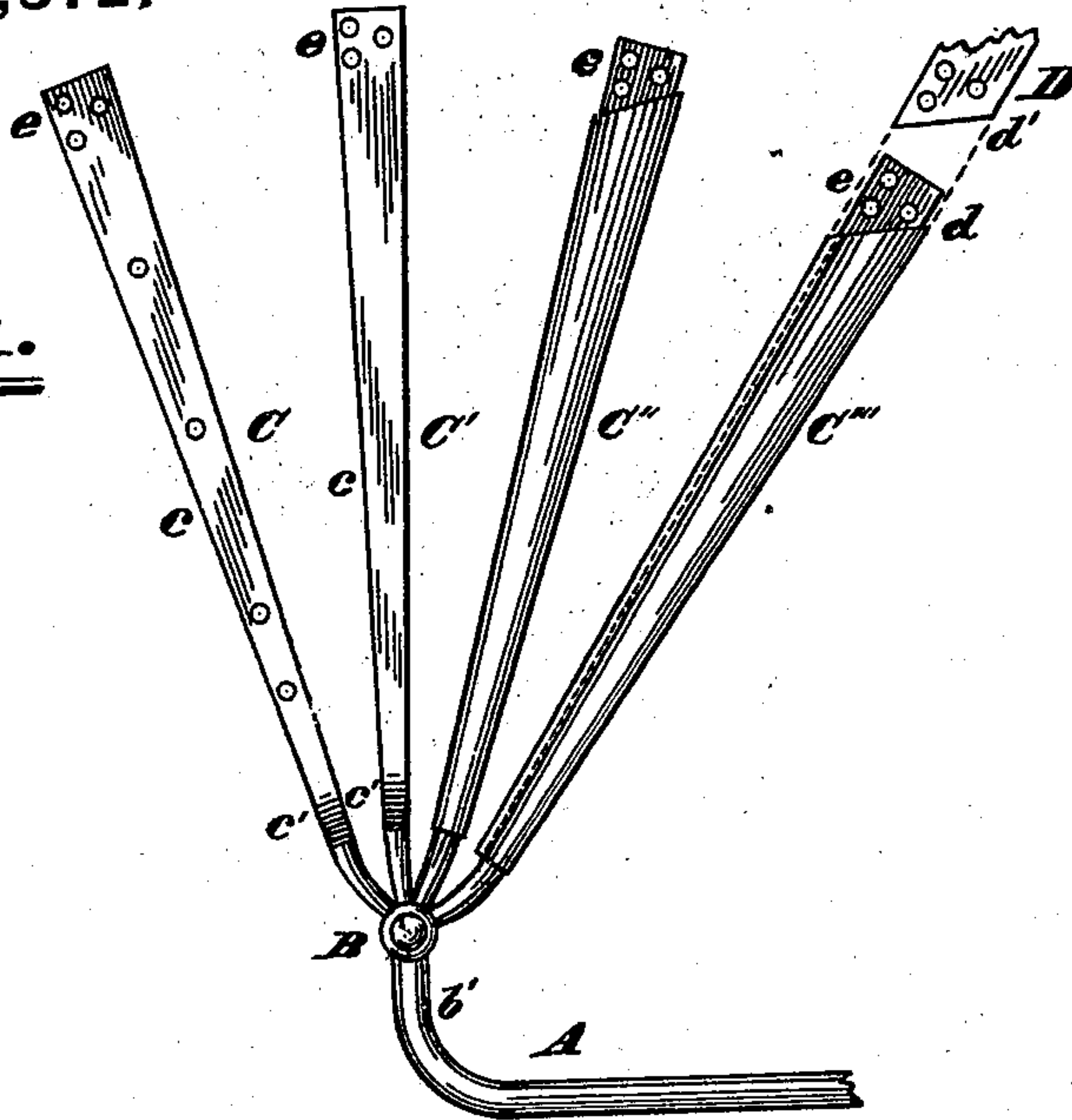


Fig. 3.

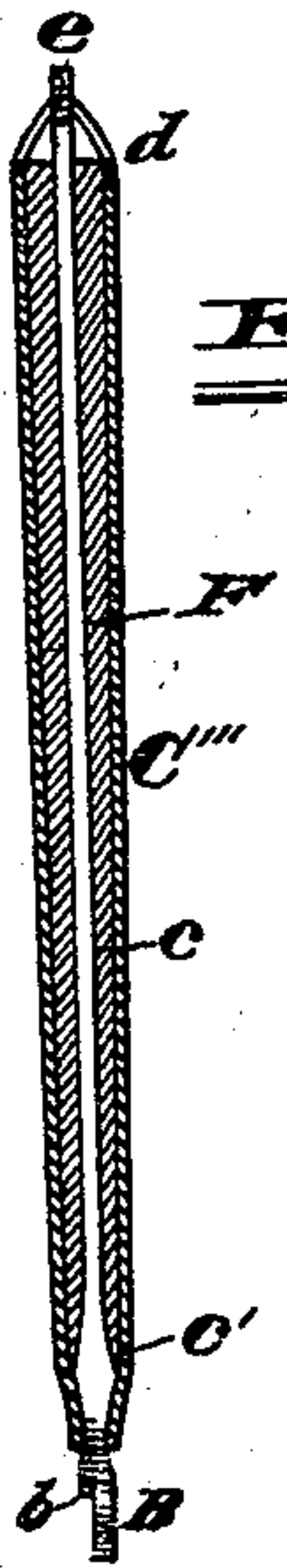


Fig. 2.

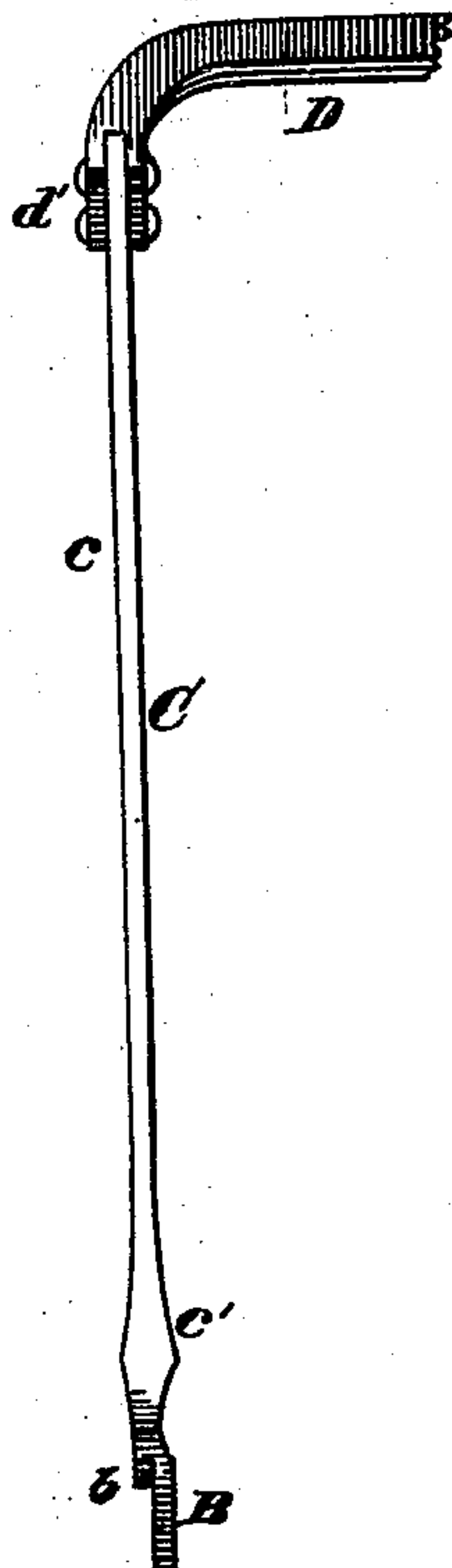
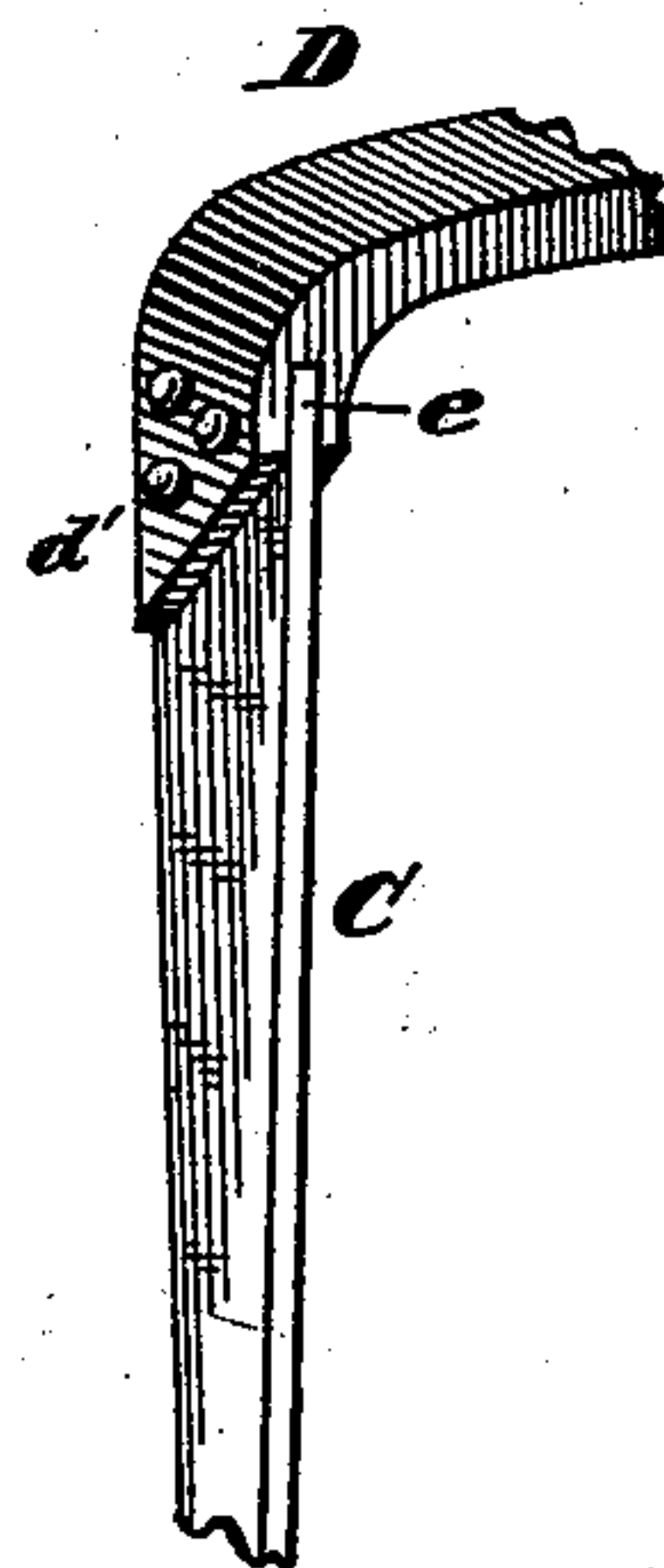


Fig. 4.



Attest

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UNITED STATES PATENT OFFICE.

BENJAMIN J. WARDEN, OF CINCINNATI, OHIO.

CARRIAGE-BOW.

SPECIFICATION forming part of Letters Patent No. 230,372, dated July 20, 1880.

Application filed May 23, 1880. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN J. WARDEN, a citizen of the United States, residing at Cincinnati, in the 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 carriage-bows and to slat-irons for forming the bow-frames of falling tops for buggies and other vehicles.

It consists, in the first part, of a slat-iron having the eye for the pivot-joint at the lower end, from which point it increases in size to the point of junction with the end of the bow-slat to correspond in size with the end of the bow-slat. It is then tapered or shouldered off to form a tongue, which is of tapering form, increasing in width and corresponding with the width of the dependent end of the bow, which is formed of wood or other suitable material, securely fastened upon each side of the tongue of the slat-iron.

My invention consists, in the second part, of a carriage-bow support formed of the slat-iron above described, in combination with two slats securely fastened upon each side of the tongue of the slat-iron and projecting upward to the bow proper, which is made of wood and slotted to receive the tenon end of the slat-iron, thus forming a strong, cheap, durable, and symmetrical support for the bow.

Other features of my invention will be fully pointed out in the description of the accompanying drawings.

In the accompanying drawings, Figure 1 is a vertical elevation of one side of a vehicle-top, showing my improvements in general. Fig. 2 is a vertical elevation of the slat-iron, showing its connection with the bow proper. Fig. 3 is a vertical sectional elevation, showing the manner of applying the slats and covering to the slat-iron and the tenon and taper for forming a joint with the bow proper. Fig. 4 is a perspective view, showing the jointed slat-iron and bow proper, each broken off a portion of its length.

A represents the shifting-rail of a buggy-top. C C' represent the slat-iron, which is composed of the eye-joint B, journaling on the goose-neck b' of the shifting-rail.

c' is the shoulder which supports and sus-

tains the dependent end of the bow-slat F. It is made tapering to give it symmetry and strength.

c represents the tongue of the slat-iron, to which is riveted or securely fastened upon each side the tapered oval-shaped bow-slats F, which together form the dependent end or supporting parts of the bow proper.

e represents that portion of the slat-iron which projects above the top of the bow-slats, forming a tenon, to which is attached the bow proper.

The slat-iron C may be made of one piece of forged iron, or it may be made of malleable iron. The tenon or tongue part c of the slat-iron should be made to correspond with the tapering form of the bow-slat and of sufficient thickness to give it the requisite strength to support the top. When wooden slats are used upon each side of the tongue c they may be screwed, riveted, or glued thereto.

D represents a wooden carriage-bow, which is mortised at either end and pinned or screwed to the tenon e of the slat-iron.

C'' represents one of the slats covered with a seamless cover, which may be made of undressed leather, papier-maché, or other suitable material, which should be beveled or chamfered off at the edges for forming a lap-joint. It is united or secured to and around the bow by cement. It is then japanned or finished, and forms a seamless cover, more attractive and at the same time cheaper and more durable than the ordinary bow-cover. This form of covering combined wooden and metal bow-supports is much preferable, as it thoroughly protects the parts from moisture, preventing the rusting of the metal and the defacing of the covering.

Instead of using the cover above described cemented to the slat and then finished, the cover may be made and fitted to the slat in the manner shown and described in my patent of December 9, 1879.

A third form of covering the slats and slat-iron is to use undressed leather cemented on the slat, and then, for ornament, it may be stitched on the slat, as shown at C''', after which it is japanned and finished, and forms another feature of my invention.

My invention enables me to make slat-irons and bow-slats united and finished ready for

the coach-maker to combine with the bow proper, and form a new article of manufacture which is at once cheaper, more durable, and more beautiful and attractive than the various articles hitherto known to the trade.

A very important feature of my invention is the tapering form of the tongue *c*, which is made to correspond in width and shape with the preferred form of bow-slat, the end of which forms a tenon of the same width as the bow proper, thereby forming a very light but strong and durable support for the bow, and I believe I am the first to make a tapering slat-iron to support carriage-bows.

An inferior form of making my slat-iron and support for the bow would be to extend the tongue about two-thirds of the length of the slat, which would be made of one piece and of material which could be united to the bow proper with the bow-supports by metal tenons or sockets, then firmly joining the parts together, and then covered and finished in the manner above described.

I claim—

1. The slat-iron C, consisting of a flat metallic tapering tongue, *c*, for receiving the bow-slats which extend the entire length of the tongue, and provided near its lower end with a laterally-projecting shoulder and an eye-joint, substantially as shown and described.

2. A slat-iron composed substantially of the eye-joint, B, the enlarged shoulder *c'*, the tapering tongue *c*, and the tenon *e*, adapted to support the bow proper, as and for the purpose set forth.

3. The combination of the slat-iron C, consisting of a tapering flat metallic tongue, *c*, provided near its lower end with a lateral shoulder, *c'*, below which is formed the eye-joint B, with the tapering bow-slats F, attached to the opposite sides of the tapering slat-iron and supported at their lower ends by the lateral shoulders of the latter, substantially as described.

4. A carriage-bow support composed substantially of slat-iron C, tapering tongue *c*, bow-slats F, and seamless covering C'', combined and finished as herein set forth.

5. The slat-iron C, having the tapering tenon *c* and tenon *e* extending the whole length of the bow-slats F, adapted to support the bow proper, as and for the purpose herein set forth.

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

BENJAMIN J. WARDEN.

Witnesses:

JNO. E. JONES,

THOS. B. REYNOLDS.