A. SPAULDING.

MODE OF PROTECTING THE CHORDS OF TRUSS-BRIDGES.

No. 173,361. Patented Feb. 8, 1876.

FIG. 2

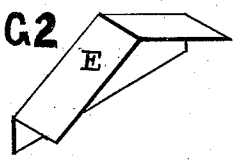


FIG. 1.

FIG. 4.

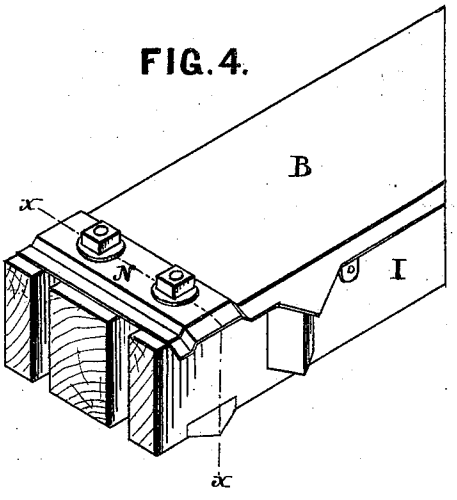
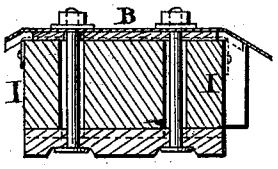


FIG. 5.



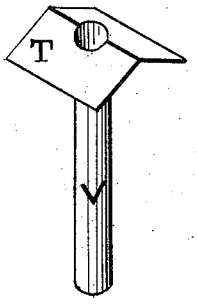


FIG. 3

Witnesses:

Doan B. Colcord

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UNITED STATES PATENT OFFICE.

ALONZO SPAULDING, OF CEDAR FALLS, IOWA.

IMPROVEMENT IN MODES OF PROTECTING THE CHORDS OF TRUSS-BRIDGES.

Specification forming part of Letters Patent No. **173,361**, dated February 8, 1876; application filed December 6, 1875.

To all whom it may concern:

Be it known that I, ALONZO SPAULDING, of Cedar Falls, in the county of Black Hawk and State of Iowa, have invented a new and Improved Mode of Protecting the Chords of Truss-Bridges by an impervious cover; and I do declare that the following is a full, clear, and exact description of the construction and method of applying the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perpective view of a portion of a lower chord of a bridge with the chord-cover applied. Fig. 2 is a perspective view of an angle-block end cover, and Fig. 3 a perspective view of an angle-block tube. Fig. 4 is a perspective view of a portion of the upper chord of a bridge, with the chord-cover applied. Fig. 5 is a vertical cross-section on line *x x* of Fig. 4.

The nature of my invention consists in covering the chords of truss-bridges, before the braces and superstructure are put upon them, with tin, zinc, copper, sheet-iron, or other impervious flexible material, constructed and applied as herein shown, for the purpose of protecting them against the action of water, thereby increasing their durability and strength.

The chord-cover A B N, in Fig. 1, I make of sufficient length to cover the ends and upper surface of the chord I I, including the notches and angle-blocks, and of sufficient width to project on either side of the chord, so as to form an eaves, one inch or more from the side of chord, when turned down at an angle of forty-five degrees, as shown in Fig. I. The folds C C, Fig. 1, on either side of the notches, are made by bending and fitting the chord-cover over frets or transverse pieces of wood or metal, fastened to the upper surface of the chord. These folds are for the purpose of keeping the water which may collect on the cover from running into the notches.

I make angle-block end covers E E, Figs. 1 and 2, of similar material to the chord-covers, which are secured by means of flanges to the ends of the angle-blocks, as shown at E, Fig. 1. I punch or cut holes in the chord-cover for the passage of the suspending-rods, and I make angle-block tubes V, with collars T, Fig. 3, to fit accurately upon the chord-covers around the rods. After the chords are framed, packed, and bolted, I fasten to their upper surfaces the frets C C, and place the angle-blocks D, Fig. 1, in their proper positions. I then cover the angle-blocks with the end covers E, as shown in Fig. 1. I next fit the chord-covers to the chords, fitting them accurately into the notches and over the frets and angle-blocks; and, lastly, apply the angle-block tubes, dropping them into the holes in the chord-covers, through which the suspending-rods pass.

The flexible impervious cover can of course be applied to the upper chord in a similar manner as it is to the lower chord, and can be made to conform to any unevenness or irregularities upon it, and may be secured by bolts, screws, nails, or in any suitable manner.

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

A flexible impervious cover, formed substantially as described, in combination with angle-block end covers E, and collared tubes T V, for covering and protecting the chords of truss-bridges, in the manner specified.

ALONZO SPAULDING.

Witnesses:

D. B. COLCORD,

J. L. STUART.