S. W. BELLES.

TRUSSED WHIFFLETREE.

No. 187,086. Patented Feb. 6, 1877.

Fig. 1.

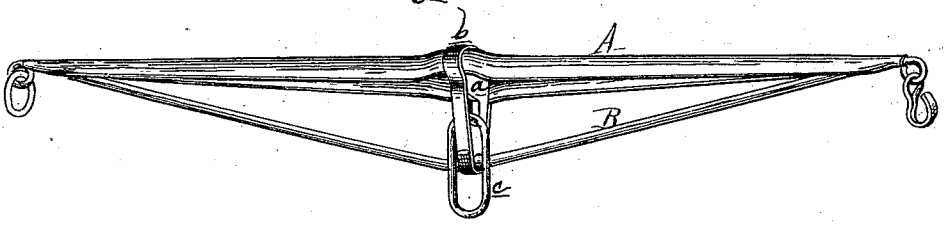


Fig. 2.

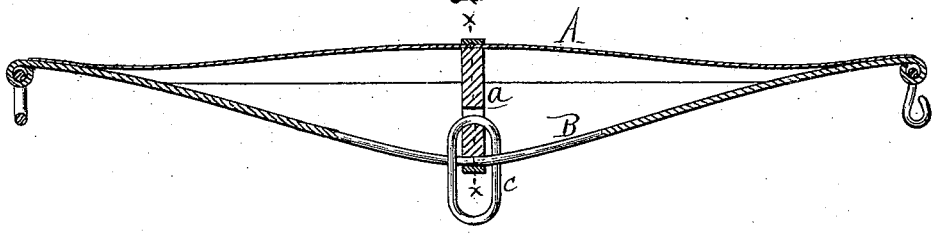
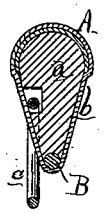


Fig. 3.



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UNITED STATES PATENT OFFICE.

SAMUEL W. BELLES, OF ORION, MICHIGAN.

IMPROVEMENT IN TRUSSED WHIFFLETREES.

Specification forming part of Letters Patent No. **187,086**, dated February 6, 1877; application filed September 11, 1876.

To all whom it may concern:

Be it known that I, SAMUEL W. BELLES, of Orion, in the county of Oakland and State of Michigan, have invented an Improvement in Trussed Whiffletrees and Neck-Yokes, of which the following is a specification:

The object I have in view is to construct a neck-yoke or a whiffletree wholly of light rolled iron, and to give the same the necessary strength to resist flexure by trussing it.

The invention consists in making the body from common band-iron, longitudinally concaved, and strengthened to resist flexure by the addition of a truss, as more fully hereinafter set forth.

Figure 1 is a perspective view. Fig. 2 is a longitudinal section. Fig. 3 is a cross-section at *x x*.

In the drawing, A represents the body of the whiffletree or neck-yoke, made of band-iron or other light sheet metal, concaved at the middle to a half-circle, and to a greater extent toward the ends, at which the sides overlap each other, being welded fast to a tension-rod, B, which passes over a metal strut, *a*, placed in the middle of the concave plate A, where it is secured in position by a metal hoop, *b*, shrunk on over all. The extremities of the tension-rod project far enough to have eyes turned in them to receive hooks or rings, as may be required. The strut *a* has a recess formed in one side to receive a link, *c*, before the hoop *b* is shrunk on.

When used as a whiffletree the truss is behind and the link underneath, being coupled by a clevis to the evener. When used as a neck-yoke the position is reversed, and the link slips over the end of the pole, in either case the tensile strain being first taken by the tension-rod, and then through the strut, transferred to the plate A, whose form is such as to enable it to resist great strain without flexure, while it costs and weighs less, and is much stronger than a wooden one. I wish it, however, to be understood that I neither claim, broadly, the invention of a trussed whiffletree, nor constructing the same entirely of metal, for such a whiffletree is shown in the patent of Ryerson, No. 68,237.

What I claim as my invention is—

The whiffletree or neck-yoke described, consisting of a body, A, made of sheet metal, bent into a concave form, as shown, the tension-rod B, the strut *a*, the hoop *b*, and the link *c*, the several parts being constructed and arranged substantially as set forth.

SAMUEL W. BELLES.

Witnesses:

H. F. EBERTS,

WM. P. SPALDING.