(No Model.)

C. F. MILBURN.

WAGON AXLE.

No. 493,039. Patented Mar. 7, 1893.

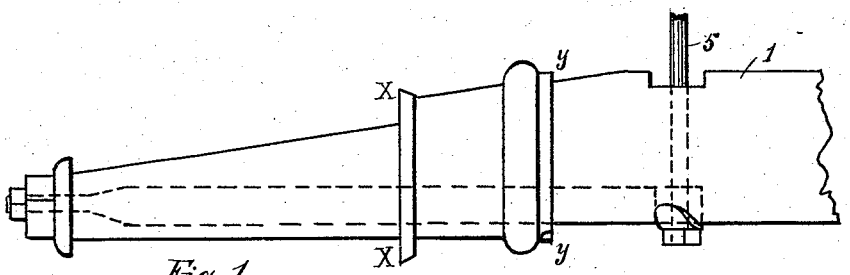

Fig. 1.

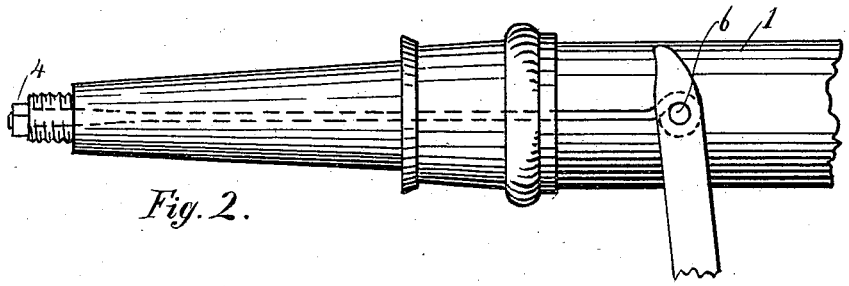

Fig. 2.

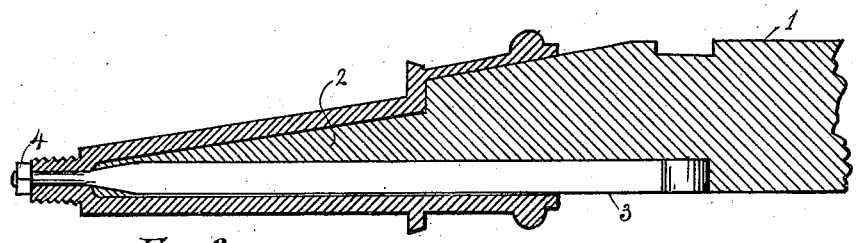

Fig. 3.

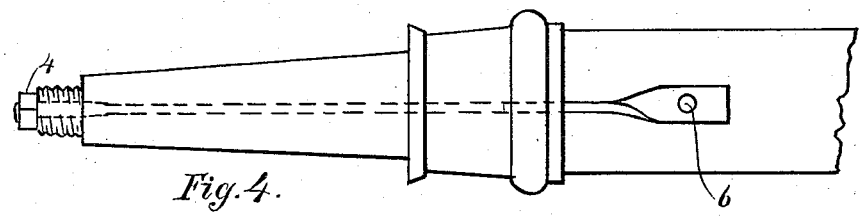

Fig. 4.

Witnesses.
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UNITED STATES PATENT OFFICE.

CHARLES F. MILBURN, OF TOLEDO, OHIO.

WAGON-AXLE.

SPECIFICATION forming part of Letters Patent No. 493,039, dated March 7, 1893.

Application filed June 27, 1892. Serial No. 438,082. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. MILBURN, of Toledo, county of Lucas, and State of Ohio, have invented certain new and useful Improvements in Wagon-Axles; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form part of this specification.

My invention relates to wagon axles of that character in which thimble skeins are employed and has for its object to provide a truss bar, which shall support and strengthen both the axle and skein at the points respectively where the greatest liability of breakage occurs.

A further object is to combine with a truss bar for the axle and skein, means for securing the skein upon the axle thereby dispensing with the use of the lag-screw usually employed.

The invention consists in the parts and combination of parts hereinafter described and pointed out in the claim.

In the drawings: Figure 1 is a side elevation of one end of an axle provided with my invention the position of the truss bar being indicated in dotted lines. Fig. 2 is a bottom plan view. Fig. 3 is a longitudinal vertical section with the front half removed to more clearly disclose the position of the bar. Fig. 4 is a bottom plan view showing the inner end of the bar twisted at right angles to the body portion.

As is well known, the breakage in wagon axles occurs either at the shoulder x—x of the skein, or at the point y—y of the wooden portion of the axle. It is my object to strengthen the parts at these points by means of a truss bar extending from the brace bolt to entirely through the skein, whereby the arm of the axle is strengthened, and the skein sustained with greater rigidity than heretofore.

1 designates the wooden axle formed with the arm 2 in the usual manner, the arm and axle being grooved or bored longitudinally from the end of the arm to the brace bolt, in order to receive the truss bar 3, which is tightly embedded within the wood so that the outer edge lies flush with the outer edge of the arm and forms a bearing for the skein. Bar 3 is of a length to reach from the outer end of the skein, at which point it is reduced to a diameter to pass through the hole in the outer end of the skein, and screw threaded to receive a nut 4, the opposite end extending to the brace bolt 5 of the axle and formed with an opening 6 to receive the bolt.

In Figs. 1, 2, and 3, the opening 6 is formed by bending the bar in circular form flatwise, so that the bar occupies a recess of like depth throughout its length while in Fig. 4 the end of the bar is turned at right angles to the body portion, and the opening 6 is either formed by punching or drilling.

It will be seen that I have provided a metal support for the skein and axle that effectually avoids a breakage, and at the same time forms a secure fastening for the skein, and dispenses with the usual lag screw. It will also be observed that I use a comparatively flat and thin truss bar, and arrange the same upon its narrow edge, this enables me to strengthen the skein and axle without adding a great deal of weight to the vehicle or wasting any material.

What I claim is—

The combination with the wagon axle and skein, of a short narrow truss bar, threaded at the outer end and provided with an eye at its inner end, said truss bar being seated in a groove in the underside of the angle and extending through the skein, the nut upon the outer end and the bolt for securing the inner end to the axle.

In testimony that I claim the foregoing as my own I hereby affix my signature in presspresence of two witnesses.

CHARLES F. MILBURN.

Witnesses:
WILLIAM WEBSTER,
CARROLL J. WEBSTER.