(No Model.)

J. B. BAYNES & C. A. HENNICKE.

WAGON CLIP.

No. 401,478. Patented Apr. 16, 1889.

Fig. 1.

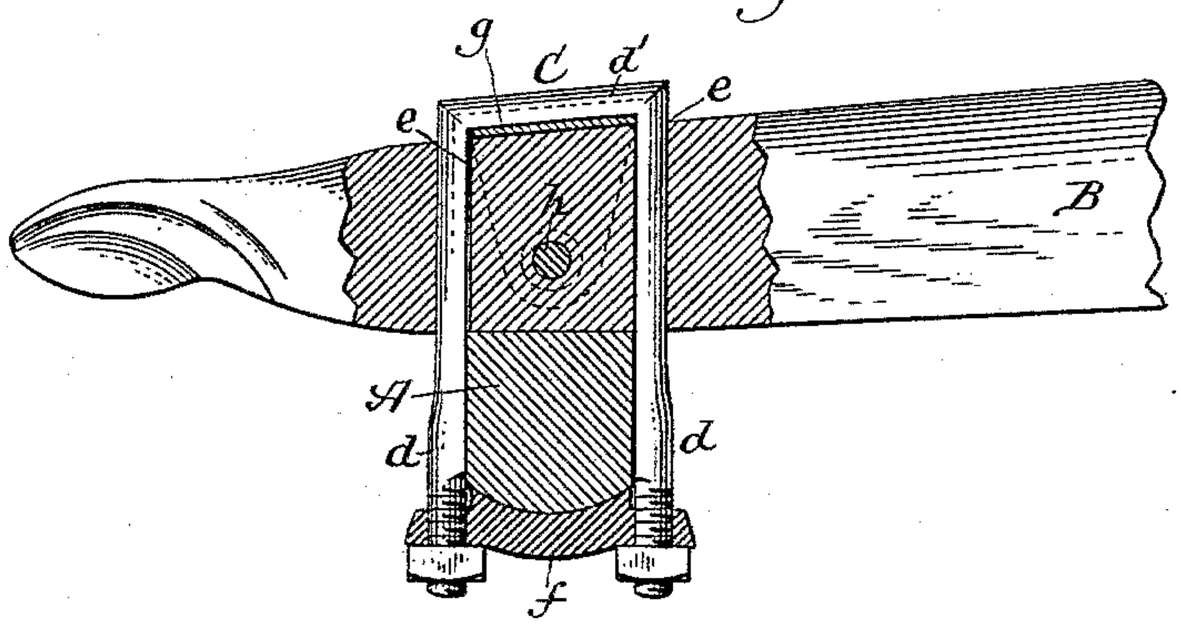


Fig. 2.

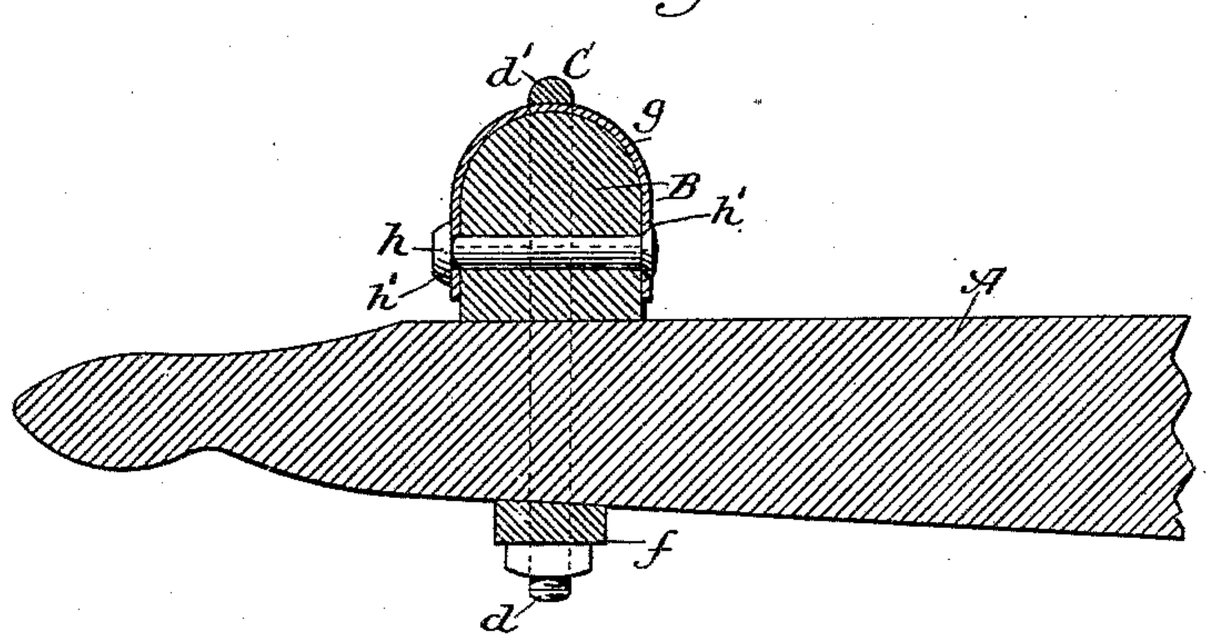
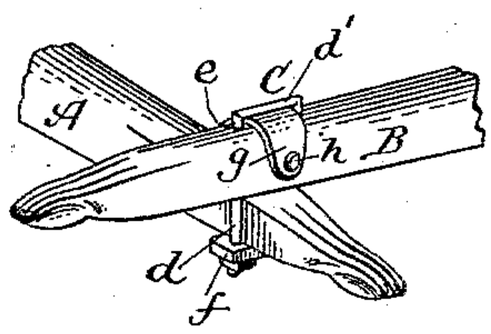


Fig. 3.



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UNITED STATES PATENT OFFICE.

JAMES B. BAYNES AND CHARLES A. HENNICKE, OF BUFFALO, NEW YORK.

WAGON-CLIP.

SPECIFICATION forming part of Letters Patent No. 401,478, dated April 16, 1889.

Application filed December 18, 1888. Serial No. 293,966. (No model.)

To all whom it may concern:

Be it known that we, JAMES B. BAYNES and CHARLES A. HENNICKE, citizens of the United States, residing at the city of Buffalo, in the county of Erie and State of New York, have invented a new and useful Improvement in Wagon-Clips, of which the following is a specification.

This invention relates to a clip which is more especially designed for use on side-bar vehicles for connecting the transverse bolsters to the side bars or the latter to the rear axle.

Previous to our invention it has been the custom to unite these parts by means of an ordinary clip, the legs of which were passed upward through openings in the bolster or axle, while the end portions of the legs straddled or rested against the sides of the side bar and were connected at their upper ends by a tie or cross bar, which rested against the upper side of the side bar. This manner of connecting the parts is, however, objectionable, as the bolster or axle, which is subjected to greater strain than the side bar, and should therefore be stronger, is weakened by the perforations which receive the legs of the clip, and is liable to split and break in the line of these perforations.

The object of our invention is to produce a strong and sightly clip whereby the bolster and the side bars, or the latter and the axle, may be connected without weakening the bolster or axle, while at the same time sufficiently strengthening the side bar through which the legs of the clip pass.

The invention consists of the improvements which will be hereinafter fully described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a sectional elevation showing our improved clip applied to a bolster and side bar. Fig. 2 is a similar view at right angles to Fig. 1. Fig. 3 is a perspective view of said parts.

Like letters of reference refer to like parts in the several figures.

A represents the bolster, B the side bar resting upon the same, and C the clip whereby these parts are secured together. The legs *d d* of the clip pass through upright openings or perforations *e*, formed in the side bar, B, and the lower portions thereof straddle or rest against opposite sides of the bolster A, as shown, the connecting-bar *d'* of the clip being arranged lengthwise of the side bar.

f is the tie-bar, connecting the free ends of the legs *d d* in the usual manner and bearing against the lower side of the bolster A.

g is a curved or U-shaped strengthening-plate arranged underneath the cross-bar *d'* of the clip at right angles to the latter and resting against the upper convex side of the side bar. The ends of the strengthening-plate *g* extend down the sides of the side bar to nearly the lower edges thereof, and the plate is secured to the side bar by a horizontal rivet, *h*, passing through the side bar and through openings *h'* in the end portions of said plate, as clearly shown in Figs. 1 and 2. The curved plate *g* serves to strengthen the side bar and compensates in a measure for the weakening of the same caused by the openings *e*, thereby preventing splitting of the side bar lengthwise in the line of these openings. The rivet *h* draws the end portions of the plate *g* firmly against the sides of the side bar, forming a clamp, which tightly compresses the fibers of the wood adjacent to the opening *e*. The plate *g* also affords an increased bearing-surface for the cross-bar *d'* of the clip, and prevents the same from embedding itself in the top of the side bar and splitting the latter.

In the drawings the re-enforcing plate *g* is represented as separate from the clip; but, if desired, it may be formed in one piece with the cross-bar *d'* of the clip, the plate being in this case forged flat and bent against the side bar in applying the clip to the latter.

By the use of our improved clip the necessity of perforating the bolster or axle is avoided, leaving the same strong and intact, and the side bar, which receives the lesser strain, although perforated, is sufficiently strengthened by the re-enforcing plate to sustain the strain to which it is subjected. The clip forms a stronger and more reliable connection than that effected by the ordinary clips, and it presents a neater and more sightly finish.

We claim as our invention—

1. A clip composed of legs *d d*, connected by a cross-bar, *d'*, a tie-bar, *f*, and a curved

strengthening-plate, *g*, arranged at right angles to the cross-bar *d'*, substantially as set forth.

2. The combination, with a side bar and a bolster or axle, of a clip, C, connecting said parts and consisting of legs *d d*, connected by a cross-bar, *d'*, and passing through openings in the side bar and straddling the bolster or axle, a tie-bar, *f*, and a strengthening-plate, *g*, embracing and clamping the side bar, and arranged at right angles to the connecting-bar *d'*, substantially as set forth.

3. The combination, with a side bar and a bolster or axle, of a clip, C, connecting said parts and consisting of legs *d d*, connected by a cross-bar, *d'*, and passing through openings in the side bar and straddling the bolster or axle, a tie-bar, *f*, a strengthening-plate, *g*, embracing the side bar and arranged at right angles to the connecting-bar *d'*, and a horizontal fastening rivet or bolt, *h*, passing through the end portions of the plate *g* and through the side bar, substantially as set forth.

Witness our hands this 30th day of November, 1888.

JAMES B. BAYNES.
CHARLES A. HENNICKE.

Witnesses:
W. W. VALENTINE,
FRANK AMES.