(No Model.)

D. R. VAN ALLEN.

WAGON AXLE.

No. 462,181. Patented Oct. 27, 1891.

Fig. 1.

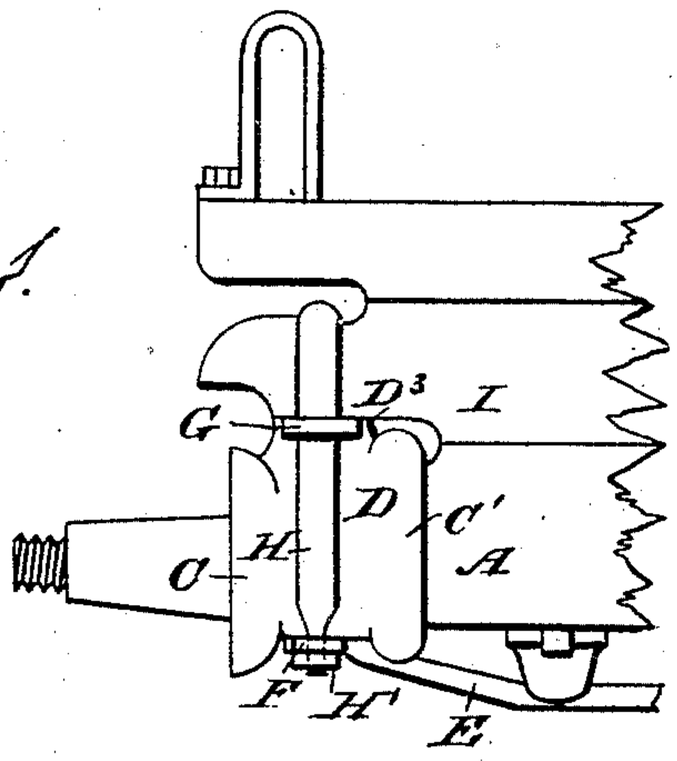


Fig. 2.

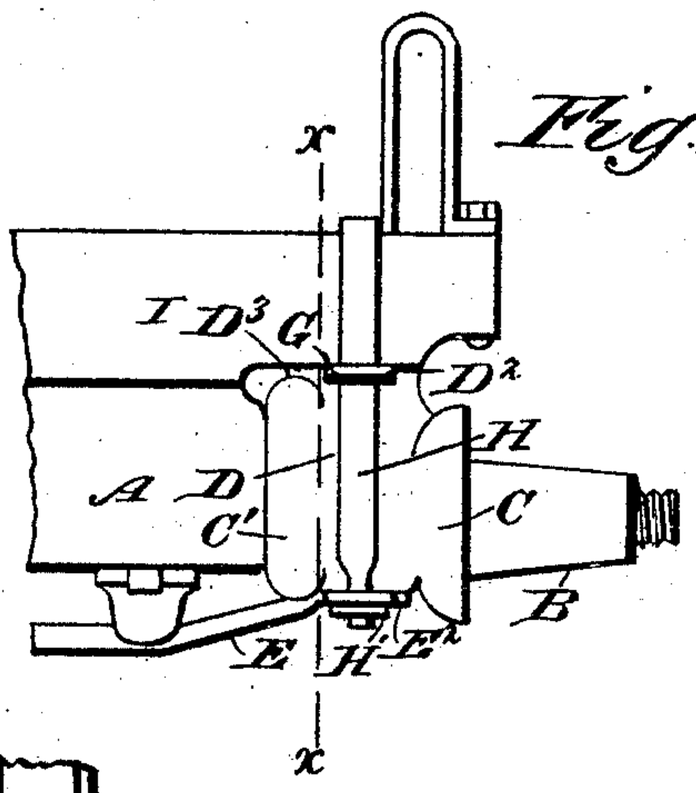


Fig. 3

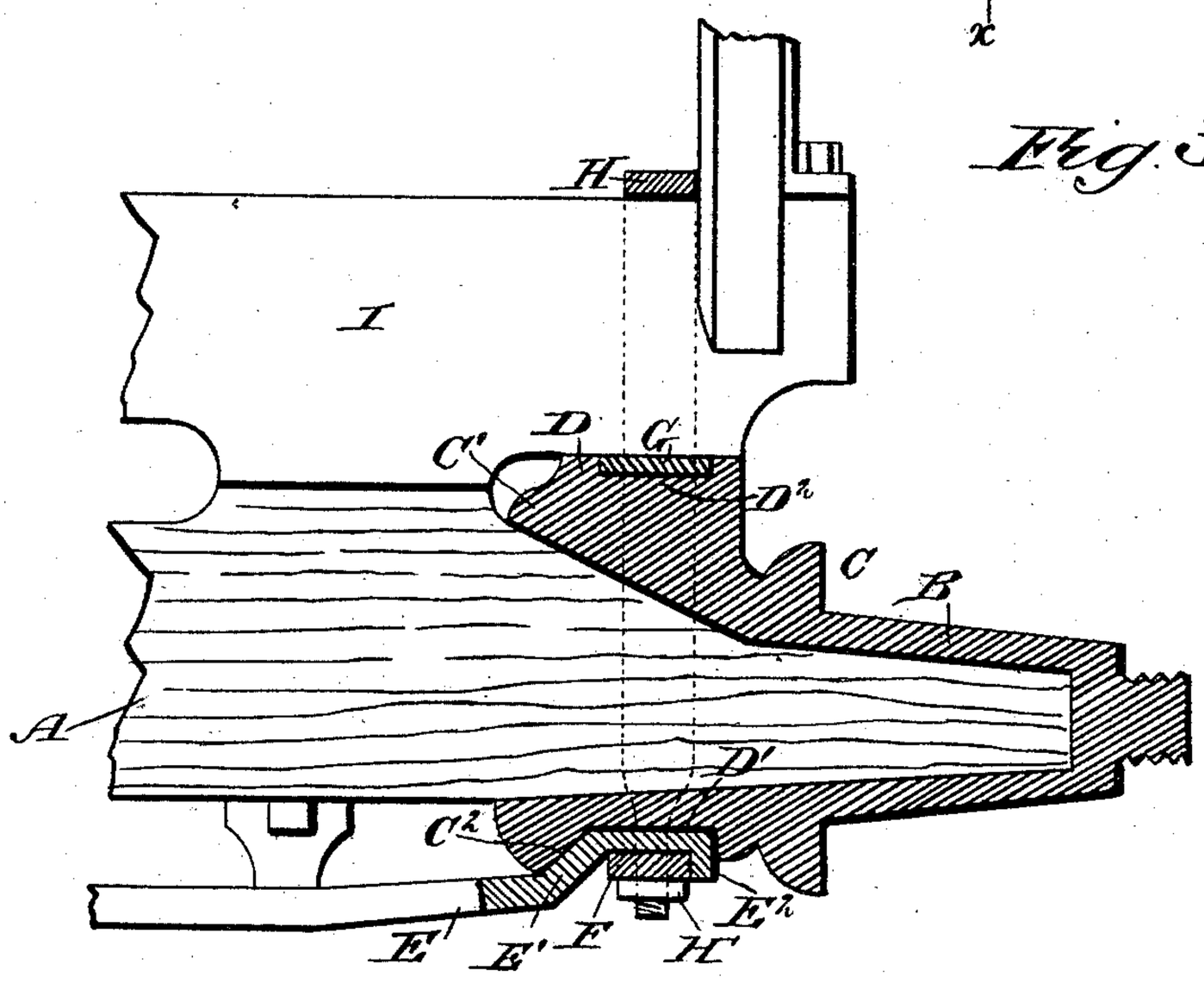
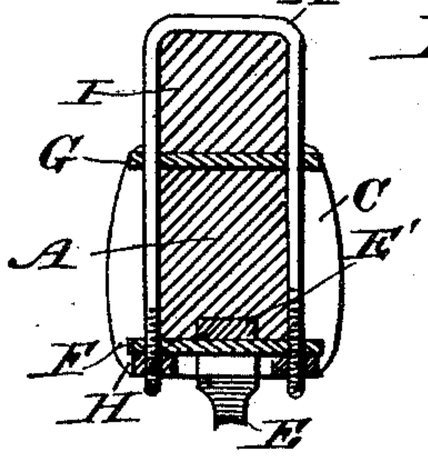


Fig. 4.



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DANIEL ROSS VAN ALLEN, OF CHATHAM, CANADA.

WAGON-AXLE.

SPECIFICATION forming part of Letters Patent No. 462,181, dated October 27, 1891.

Application filed July 13, 1891. Serial No. 399,320. (No model.) Patented in Canada May 23, 1891, No. 36,674.

To all whom it may concern:

Be it known that I, DANIEL ROSS VAN ALLEN, of Chatham, in the Province of Ontario and Dominion of Canada, have invented a new and Improved Wagon-Axle, (for which I have obtained Letters Patent in Canada, No. 36,674, dated May 23, 1891,) of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved wagon-axle which is simple and durable in construction and arranged to remove the weight from the center of the axle to the skein, so as to prevent breakage on sudden jars of the wagon or on account of heavy loads.

The invention consists of certain parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a front elevation of the front axle. Fig. 2 is a like view of the rear axle. Fig. 3 is an enlarged sectional side elevation of the improvement, and Fig. 4 is a transverse section of the same on the line $x\ x$ of Fig. 2.

The wagon-axle is provided with a suitable axle-tree A, of ordinary shape and dimensions, and usually made of hard wood, the ends being tapering and closely fitted into the interior of the hollow skeins B, as is plainly shown in Fig. 3. Each skein B is provided with the annular wheel-shoulder C and the inner collar C′, and between the two is formed a head D, as is plainly shown in the drawings.

On the under side of the head D is arranged a recess D′, extending longitudinally of the skein and engaged by the end of a truss-rod E, extending from one head to another, the truss-rod being slightly bent at E′ to fit onto a bevel C^2, formed on the outside of the inner collar C′. The extreme outer end of the truss-rod E is formed with a downwardly-extending flange E^2, engaging the cross-bar F, forming part of a clip which is also provided with a second cross-bar G, extending transversely in a recess D^2, formed on the top of the head D. The U-shaped clip H passes through the projecting ends of the cross-bar G and has its lower ends rounded to pass through apertures in the projecting ends of the cross-bar F, the lower ends being threaded and engaged by nuts H′, screwing against the lower cross-bar F.

The upper part of the clip H engages the bolster or sand-board I, which latter rests at its outer end on the flat top of the head D, as is plainly illustrated in Figs. 3 and 4, the flat top of the head forming a stool or resting-place for the bolster or sand-board. The clip H passes close to the sides of the bolster or sand-board and the sides of the head, so that the several parts are securely locked in place by the clip.

It will be seen that by resting the bolster or sand-board at the heads of the skeins the weight of the load is transferred from the middle of the axle-tree A to the skeins at the end of the axle, so that the pressure is exerted on the axle close to the wheels.

By fastening the bolster or sand-board to the axle in connection with the truss-rod E a perfect and solid truss is constructed adapted to withstand considerable strain, so that a sudden jar or a heavy load is not liable to break the axle.

It will be seen that by the construction of the device as described the bolster is strengthened at its weakest points—that is, at or near the ends.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. As an improved article of manufacture, the axle-skein B, formed at its inner end with a head D, having a flat upper face provided with a transverse recess D^2, a flat lower face having a longitudinal recess D′, and the incline C^2, into which the outer end of the recess D′ merges.

2. In a wagon-axle, the combination, with a skein provided with a head formed with transverse and longitudinal recesses on the top and bottom, respectively, of a bolster or sand-board resting at its outer ends on the top of the said head, a truss-rod engaging with its outer end, the lower longitudinal recess in the said head, and a clip comprising a U-shaped bar extending over the said sand-board and along the sides of the head and truss-rod, and cross-bars through which pass the ends of the clip, one cross-bar being ar-

ranged in the uppermost transverse recess in the said head and the other cross-bar resting on the under side of the said skein and holding the truss-rod in its recess, substantially as shown and described.

3. In a wagon-axle, the combination, with a skein formed with a head having a recess at its bottom, of a truss-rod engaging with one end the said recess, a flange extending downward from the end of the said truss-rod, and a clip for fastening the said truss-rod to the said head, the said clip being provided with a cross-bar resting on the under side of the truss-rod and engaged by the said flange, substantially as shown and described.

DANIEL ROSS VAN ALLEN.

Witnesses:
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