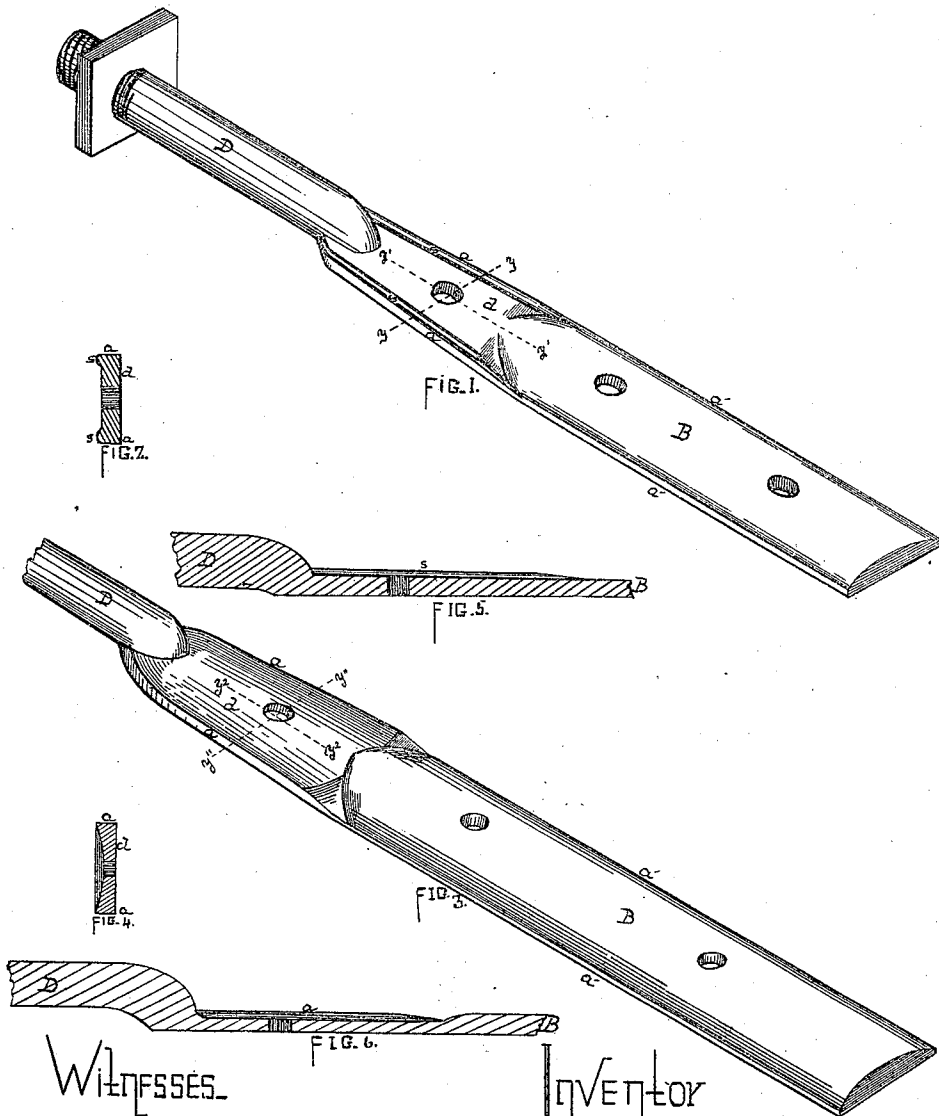


W. J. LEWIS.

Improvement in Wagon-Box Strap-Bolts.

No. 132,912.

Patented Nov. 12, 1872.



WITNESSES.

Reynolds
James S. May.

INVENTOR

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UNITED STATES PATENT OFFICE.

WILLIAM J. LEWIS, OF PITTSBURG, PENNSYLVANIA

IMPROVEMENT IN WAGON-BOX STRAP-BOLTS.

Specification forming part of Letters Patent No. 132,912, dated November 12, 1872.

To all whom it may concern:

Be it known that I, WILLIAM J. LEWIS, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Wagon-Box Strap-Bolts; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing making a part of this specification, in which—

Figures 1 and 3 are perspective views of my improved strap in slightly modified forms; Figs. 2 and 4 are sectional views through $y\ y$ and $y''\ y''$ of Figs. 1 and 3, respectively; and Figs. 5 and 6 are longitudinal sectional views in $y'\ y'$ and $y^2\ y^2$ of Figs. 1 and 2, respectively.

Like letters of reference indicate like parts in each.

Wagon-box strap-bolts have heretofore been made in the strap part of uniform thickness longitudinally, flat on the inner face, and oval transversely on the outer face. The bolt, screw, or nail holes are punched along the middle or thickest part. The part of such straps most liable to break is at the lower hole, since the breaking-strain is greatest at or near the lower or shank end, and the metal is weakest at the bolt-hole.

The object of my improvement is so to dispose of the metal along the lower end of the strap, opposite to and immediately above and below the lower bolt-hole, that with little or no increase of metal the strap will be made stronger at the lower bolt-hole than heretofore, so as to be able to withstand the greater strain to which it is subjected; and this I accomplish by thickening the edges of the strap along opposite the lower bolt-hole and immediate above and below any desired distance, either leaving the middle of the strap at the bolt-hole of uniform thickness with the middle of the strap above, or—as I prefer to do—making it of less thickness in that part, so that it shall be hollow or concave in cross-section on the outer face. In the latter case the strap will be weakened least by the punching of the bolt-hole, since the hole will be punched through the thinnest part of the strap.

To enable others skilled in the art to make

and use my improvement, I will proceed further to describe its construction and manner of use.

In the drawing, D represents the shank end of the strap-bolt, threaded in the usual way, and B the strap part. The part or section d at the lower hole, and immediately above and below for any desired distance, I make with the edges $a\ a$ thickened up or thicker than the edges $a'\ a'$ of the strap above. The thickness of the edges $a\ a$ should be such as to impart to that part of the strap the rigidity and strength desired, and, preferably, they are made as thick as or thicker than the middle of the strap above. In Figs. 1, 2, and 5 I have shown the strap of uniform thickness at all the bolt-holes, and with the edges thickened up in the part d so as to form a bead, s , along each edge; and in Figs. 2, 4, and 6 I have shown the edges similarly thickened up, but the middle part at the bolt-hole thin so that the outer face of the section d is concave in cross-section. The latter form is preferable, since the hole is punched through the thinnest part of the metal, and consequently weakens it least. This construction, as illustrated in Figs. 3, 4, and 6, may be variously modified, so as to embrace the same useful result by substantially the same means, the form shown in Figs. 1, 2, and 5 being one of the most obvious modifications. The work of manufacture may be done by rolling or swaging, in any of the ways known to the art.

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

As an improvement in wagon-box strap-bolts of the class referred to, a section, d , at and immediately above and below the lower hole, the outer edges of which shall be thickened, the middle remaining of the same thickness or being made thinner, substantially as set forth.

In testimony whereof I, the said WILLIAM J. LEWIS, have hereunto set my hand.

WILLIAM J. LEWIS.

Witnesses:

A. S. NICHOLSON,
R. C. WRENSHALL.