E. N. HARTWELL.

Improvement in Ox-Bow Pins.

No. 129,888. Patented July 30, 1872.

Fig: 1.

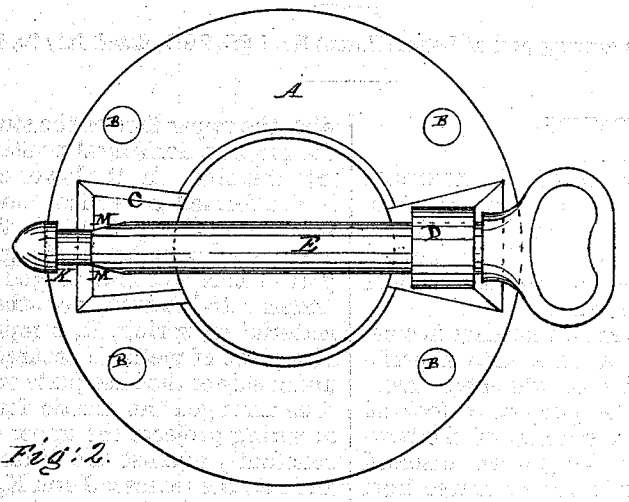


Fig: 2.

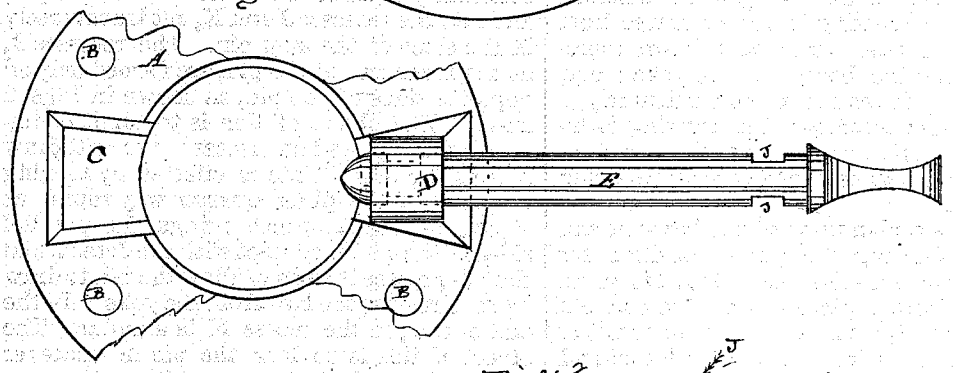
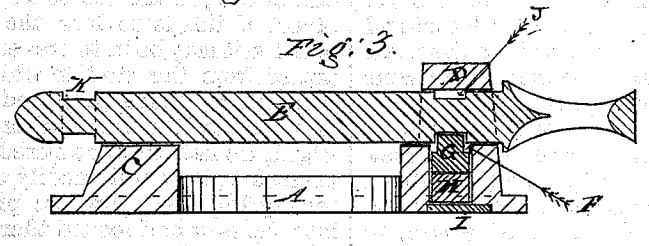


Fig: 3.



Witnesses
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UNITED STATES PATENT OFFICE.

EDWIN N. HARTWELL, OF SHARON, CONNECTICUT.

IMPROVEMENT IN OX-BOW PINS.

Specification forming part of Letters Patent No. **129,888**, dated July 30, 1872.

SPECIFICATION.

To all whom it may concern:

Be it known that I, EDWIN N. HARTWELL, of Sharon, Litchfield county, State of Connecticut, have invented certain new and useful Improvements in Bow-Pins for Ox-Yokes; and I do hereby declare that the following is a full description of the same.

The nature of my invention consists in combining with a washer or base-plate a perforated stud or pin-holder in which an elastic detent is secured for the purpose of locking into recesses formed transversely of the bow-pin to prevent its unlocking when inserted into the bow, or getting lost or separated from the perforated stud when withdrawn therefrom to release the bow from the yoke; but, to describe my invention more particularly, I will refer to the accompanying drawing forming a part of this specification, the same letters of reference wherever they occur referring to like parts.

Figure 1 is a plan view of the bow-pin and base-plate, showing the pin in position for locking the bow into the yoke. Fig. 2 is a plan view of the same parts, showing the position of the pin quarter turned round to admit of its being unlocked from the elastic detent and drawn back to release the bow from the yoke. Fig. 3 is a longitudinal cut section of the same parts through the line *x x*, Fig 1.

Letter A represents the base-plate or washer, made of malleable iron or other suitable metal, of about three inches in diameter, with a central opening of about one and three-fourth inch in diameter, or other suitable size, to admit of the insertion of the end of the ox-bow therein. B B are screw-holes for securing the plate upon the yoke. At opposite sides of the upper side of the plate are formed, at the time of casting the plate, or may be otherwise attached thereto, two studs, C and D. The stud C is intended as a prop to hold the end of the bow-pin E in a horizontal position when inserted through the end of the bow, and has its upper surface slightly hollowed out to prevent any tendency of a side motion in the end of the pin. The stud D has a horizontal circular hole through it, of the diameter of the bow-pin, with its lower side on a level with the upper face of the stud C, so as to hold the pin in a horizontal position when inserted into the bow. In the lower end of the stud D is also formed a vertical slot or opening, F, which extends up through the stud into the horizontal circular opening. In the upper part of this slot is arranged a detent, G, and underneath it a rubber or other suitable elastic material or spring, H, compressed by means of a plate of metal, I, secured by rivets to the under side of the base-plate or washer. When thus arranged the elastic force of the rubber or spring projects the upper end of the detent constantly against the sides of the bow-pin, and into the recesses J and K, cut transversely in the sides of the bow-pin. The recesses J, at the inner end of the pin, are formed only on opposite sides of the pin, as shown in Figs. 2 and 3. The object of this is to admit of unlocking the pin when necessary to withdraw it from the bow. This is effected by turning the head of the pin a quarter way round, as shown in Fig. 2, which brings the parallel sides of the pin in contact with the detent, and thus depresses it so as to allow the pin to draw back to release the bow from the yoke. In the end of the pin the recess K is annular. The object of this is to lock the pin in whatever position it may be in to prevent its getting separated from the stud in which it works. To facilitate its being projected forward or shot into the bow the inner edges, as shown at M, Fig. 1, are flattened or tapered off, so that when pressed in they will readily compress the detent-spring and allow the pin to be inserted into the bow and locked therein when turned, as shown in Fig. 1.

Having now described my invention, I will proceed to set forth what I claim and desire to secure by Letters Patent of the United States:

I claim the bow-pin E, made as described, in combination with the studs C and D and detent G and spring H, for the purposes set forth, and substantially as described.

EDWIN N. HARTWELL.

Witnesses:

GEORGE A. LAMB,

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