(No Model.)

O. BATES.

CLEVIS.

No. 417,804. Patented Dec. 24, 1889.

Fig. 1.

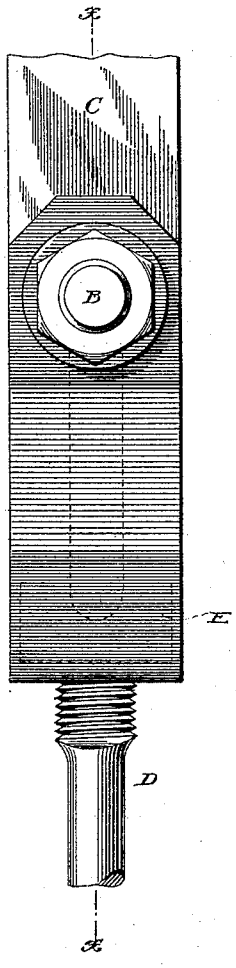


Fig. 2.

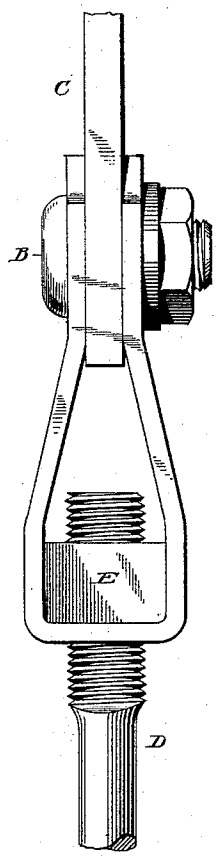


Fig. 3.

on line x-x.

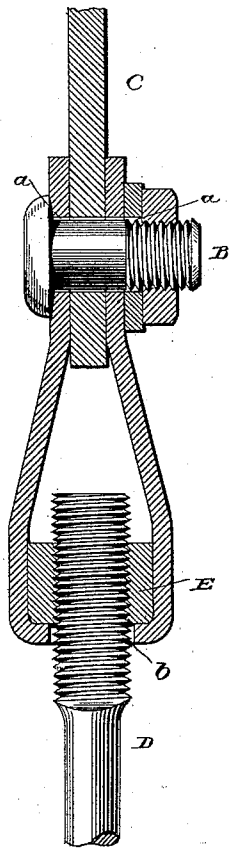
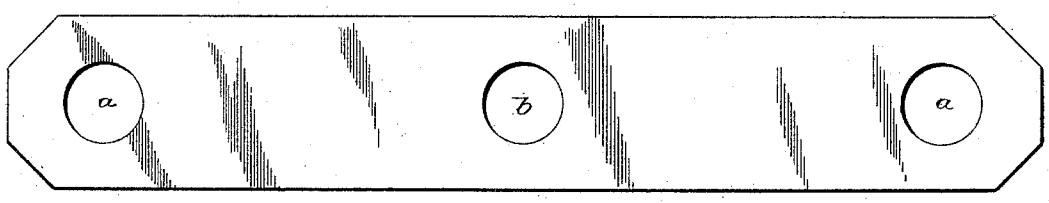


Fig. 4.



Witnesses

H. H. Mortimer.

H. R. Kennedy

Inventor

Oward Bates

By his Attorney

Phil T. Dodge

N. PETERS. Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

ONWARD BATES, OF MILWAUKEE, WISCONSIN.

CLEVIS.

SPECIFICATION forming part of Letters Patent No. 417,804, dated December 24, 1889.

Application filed September 26, 1889. Serial No. 325,115. (No model.)

To all whom it may concern:

Be it known that I, ONWARD BATES, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain Improvements in Clevises, of which the following is a specification.

My invention relates to a clevis to be used in bridges and other structures for connecting iron rods to coupling-pins; and it consists of a strap-iron bar bent into U form and provided with pin-holes in its extremities and with a central hole for the rod, and with a nut seated in its interior, as hereinafter explained in detail.

In the accompanying drawings, Figure 1 is a side view of my improved clevis. Fig. 2 is an edge view of the same. Fig. 3 is a transverse section on the line *x x* of Fig. 1. Fig. 4 is a view of the blank.

In constructing my clevis I provide an iron or steel bar or strap, such as shown in Fig. 4, of uniform thickness, and preferably of uniform width. These blanks are preferably formed by shearing pieces of suitable length from strap or bar iron or steel, such as is commonly sold in the market. The blank is bent transversely at two points on opposite sides of its center into a substantially U form, its arms being usually brought nearer together at the extremity than at the middle, as shown. Before or after bending the blank I provide it near its ends with two holes *a* in line with each other, to receive a coupling-pin B for connecting the clevis to a bar or other member C. The clevis is also provided at its middle with a hole *b* therethrough to receive the threaded end of the rod D. Within the clevis, over the hole *b*, I seat a nut E, which is thus firmly sustained and held in position. The threaded end of the rod D is passed loosely through the opening *b* and screwed into the nut.

If it be desired to lighten the clevis, slots or openings may be formed in the arms, as indicated by dotted lines in Fig. 1.

I am aware that clevises of U form—that is to say, with parallel arms and an intermediate semicircular portion—have been combined with an internal block or plate pivoted to the curved portion, to serve as a seat for the nut, and to such structures I lay no claim.

It is to be observed as a distinguishing feature of my device that its middle portion or seat is of flat form, adapted to receive and directly support an ordinary standard nut, and that the seat-arms rise directly and at right angles from the connecting portion or seat in such manner as to embrace the nut between them. Under my construction I am enabled to dispense with the customary seat or block for sustaining the nut, to reduce the size of the clevis, to avoid the usual forging and upsetting operations, which tend to demoralize and weaken the metal, and to transmit the strains in a more direct line through the connections.

Having thus described my invention, what I claim is—

1. The herein-described clevis, consisting of the metal strap of uniform thickness bent to present the side arms and the flat connecting portion or seat, and the nut E, located between the arms and directly upon the seat, as shown.

2. The stirrup consisting of the flat angular nut and the stirrup proper, the latter consisting of a strap having the perforated flat portion to sustain the nut, and the two arms rising at right angles from the flat portion past opposite sides of the nut and converging above the latter, as described and shown.

3. In combination with the perforated bar C and the threaded rod D, the connection consisting of the angular nut upon the end of the rod, the strap-clevis perforated to receive the rod and arranged to sustain and closely embrace the nut, and the coupling pin or bolt B, passing through the ends of the clevis and the intermediate bar.

In testimony whereof I hereunto set my hand, this 14th day of September, 1889, in the presence of two attesting witnesses.

ONWARD BATES.

Witnesses:
W. W. CHRISTIE,
M. H. RYAN.