

(No Model.)

D. M. MOTHERWELL.
BOLT.

No. 409,696.

Patented Aug. 27, 1889.

Fig. 1.

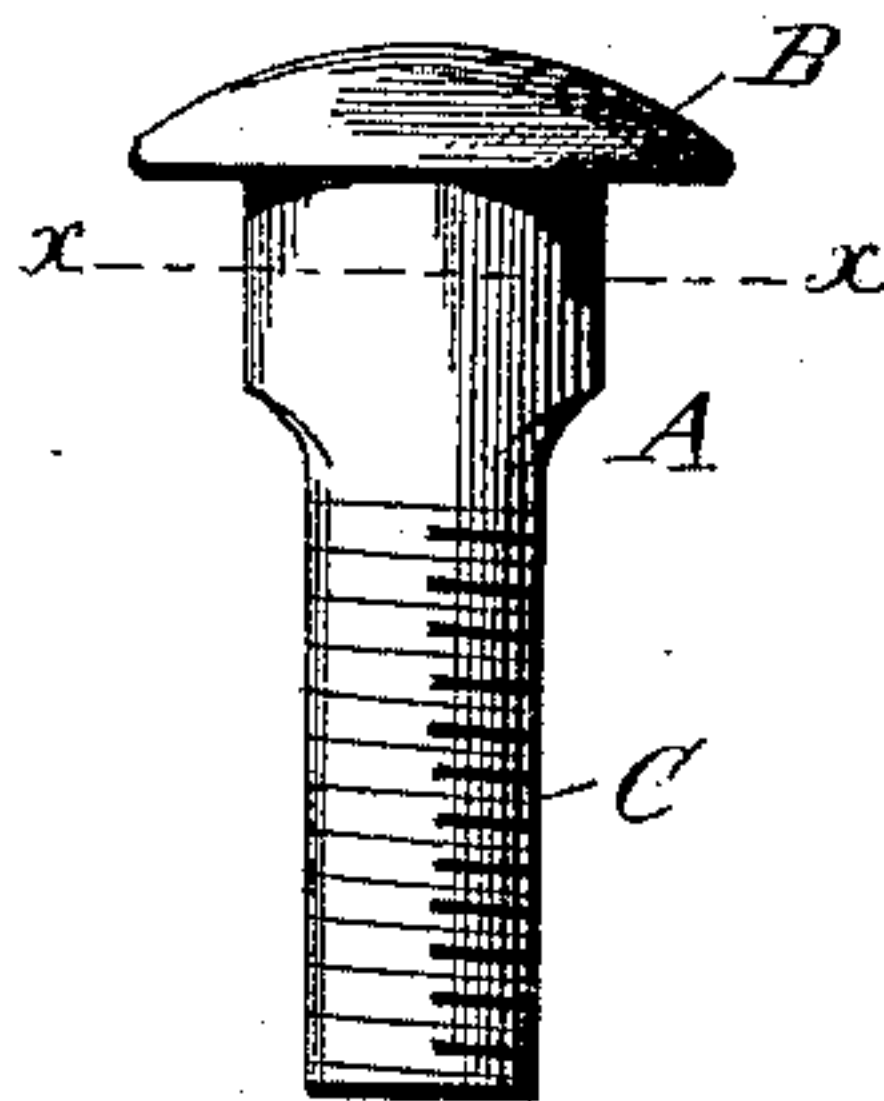


Fig. 2.

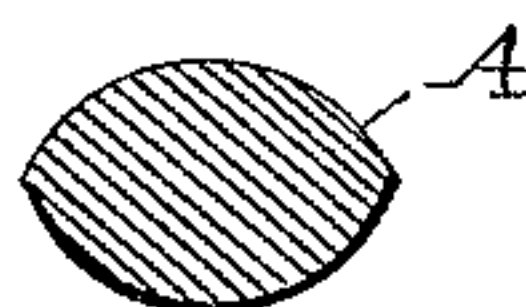
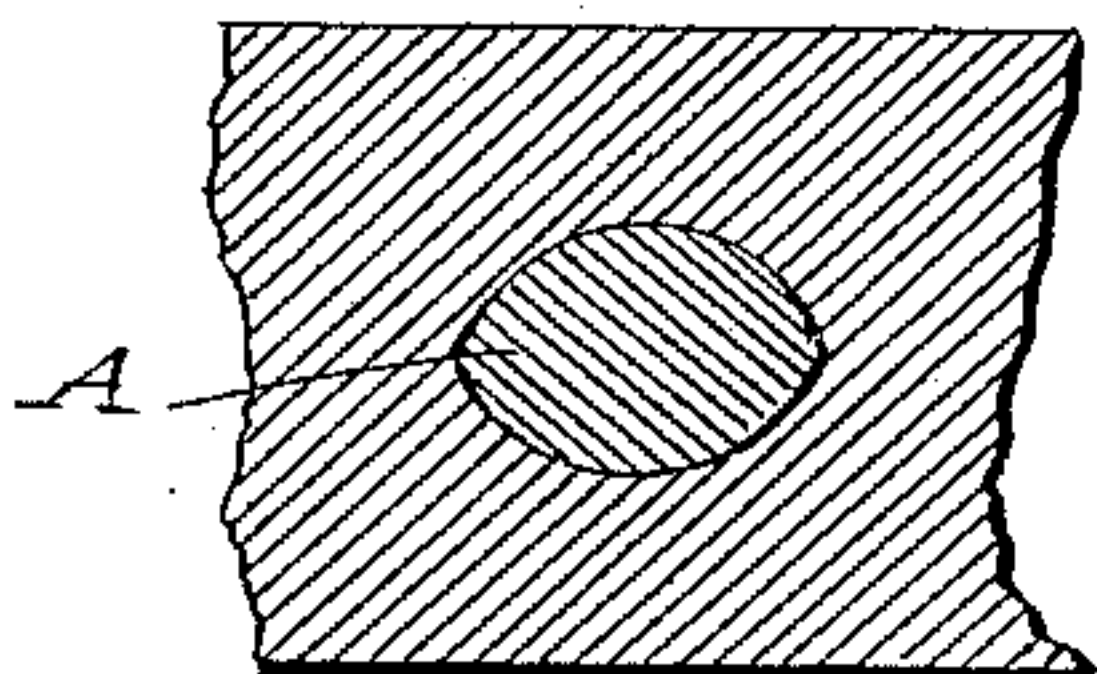


Fig. 3.



Witnesses
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DAVID M. MOTHERWELL, OF LOGAN, OHIO.

BOLT.

SPECIFICATION forming part of Letters Patent No. 409,696, dated August 27, 1889.

Application filed April 25, 1889. Serial No. 308,626. (No model.)

To all whom it may concern:

Be it known that I, DAVID M. MOTHERWELL, a citizen of the United States, residing at Logan, in the county of Hocking and State of Ohio, have invented certain new and useful Improvements in Bolts; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to bolts, and has for its object to construct a bolt that will not weaken the timber or other material to which it may be applied to any unnecessary degree and which will be held securely from turning. Bolts as generally constructed have square necks or round necks with a teat or projection extending from either the head or the neck of the bolt. In the first instance the square neck requires a square hole in the timber or other material, which generally impairs what it should improve by reason of punching out a greater amount of material than is necessary, thereby weakening the timber or other material, and oftentimes starting a crack by reason of the four corners. In the case of the bolt having a teat or projection the latter would invariably twist off or get out of place, thus permitting the bolt to turn.

The improvement consists in a bolt having its neck or an enlargement below its head oblong in cross-section, the major diameter being designed to be placed parallel with the fibers or grain of the timber or other material,

whereby there will be no tendency to separate the same by lateral strain.

In the drawings, Figure 1 is a front view of a bolt embodying my invention; Fig. 2, a cross-section of the bolt on the line X X of Fig. 1; Fig. 3, a cross-section showing the application of the bolt.

The bolt A is of ordinary construction, having a head B at one end and a threaded portion C at its other end. The neck *a* of the bolt is oblong in cross-section, being oval, as most clearly shown in Figs. 2 and 3. To apply the bolt, a hole is bored or punched in the timber or other material, which will readily admit of the insertion of the same, the neck being placed so that the oblong portion will extend parallel with the fibers of the wood or other material, as shown most clearly in Fig. 3, so that when the bolt is driven into the timber or other material up to its head there will be no lateral strain which would have a tendency to separate the fibers, the strain, on the contrary, being in the direction of the length of the fibers.

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

As an improved article of manufacture, a bolt having its neck or an enlargement below its head oblong in cross-section, substantially as and for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses.

DAVID M. MOTHERWELL.

Witnesses:

G. W. PULLEN,
S. D. VICKERS.