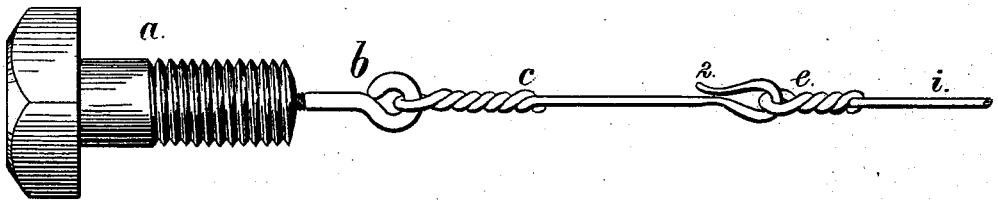
F. A. BIDWELL.

Device for Patching Boilers.

No. 209,603. Patented Nov. 5, 1878.



Witnesses

Chas. H. Smith

Harold Serrell

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UNITED STATES PATENT OFFICE.

FRANCIS A. BIDWELL, OF NORWICH, CONNECTICUT.

IMPROVEMENT IN DEVICES FOR PATCHING BOILERS.

Specification forming part of Letters Patent No. **209,603**, dated November 5, 1878; application filed August 22, 1878.

To all whom it may concern:

Be it known that I, FRANCIS A. BIDWELL, of Norwich, in the county of New London and State of Connecticut, have invented an Improvement in Bolts for Patching Boilers, of which the following is a specification:

In Letters Patent No. 202,403, granted to me April 16, 1878, a bolt is shown with a screw-hole in the end, into which is screwed an eye for the wire or string that is used to draw the bolt up to the bolt-hole.

When a wire is connected with the bolt it has to be untwisted or unhooked after the bolt has been drawn to place. This is also the case where a screw-eye is used, as in aforesaid patent, or the nut has to be drawn over the wire from one end to the other before disconnecting the wire; and where the wire is connected to the end of the bolt or to an eye it is liable to break by the frequent bending operations to which it is subjected, and the end of the wire is often left projecting in consequence of the carelessness of the workman, and when the end of the wire is bent as a hook it is drawn along point first, and is liable to catch and the bolt to be lost.

The object of this invention is to allow the wire to be hooked to the bolt without risk of bending the hook in drawing the bolt through the boiler to the hole that receives such bolt.

In the drawing I have represented my improvement by a side view of the parts.

a represents the bolt for the boiler, to which the eye *b* is connected, as in aforesaid patent, by being screwed into a hole at the end of the bolt, or in any other convenient manner. This eye *b* forms the joint for the hooked link *c*, that is made of wire or of any suitable material.

The point 2 of the hook *c* is toward the bolt, and it is preferable that this hook be made of spring metal, so that the loop *e* upon the end of the wire *i* can easily be hooked into or disconnected from the hook.

It will now be apparent that the screw-eye *b*, or attachment for the bolt *a*, and the hooked link *c*, remain permanently connected, that the wire *i* is to be threaded through the bolt-hole in the boiler and passed to the arm-hole in the boiler, and that the hook *c* is hooked into said loop *e* after the screw or attachment has been connected with the bolt. By this means the bolt is drawn to its hole in the iron, and there is no portion of the connecting device that is liable to be caught in any stay-bolts, seams, rivets, or projections, and the link, hook, and loop draw freely through the bolt-hole, and the bolt itself can be drawn up and through the hole in the boiler-plate more easily than it could if the link *c* and attaching device *b* were in one piece, because there is often but little room between the plate of the boiler-shells.

After the bolt has been drawn through its hole in the boiler-plate, the same has to be held while the nut is put upon the end of the bolt. If a long wire is used, there is difficulty in threading the bolt over the same. By my improvement the long wire can be unhooked and the bolt held by the link *c* while the nut is slipped over the same and screwed upon the bolt.

I claim as my invention—

The combination, with the patch-bolt and the wire *i*, having a loop, *e*, of the short separate link *c*, having a hook at one end for the loop *e*, and a connection at the other end for the bolt, substantially as set forth.

Signed by me this 17th day of August, A. D. 1878.

FRANCIS A. BIDWELL.

Witnesses:
GEO. T. PINCKNEY,
CHAS. H. SMITH.