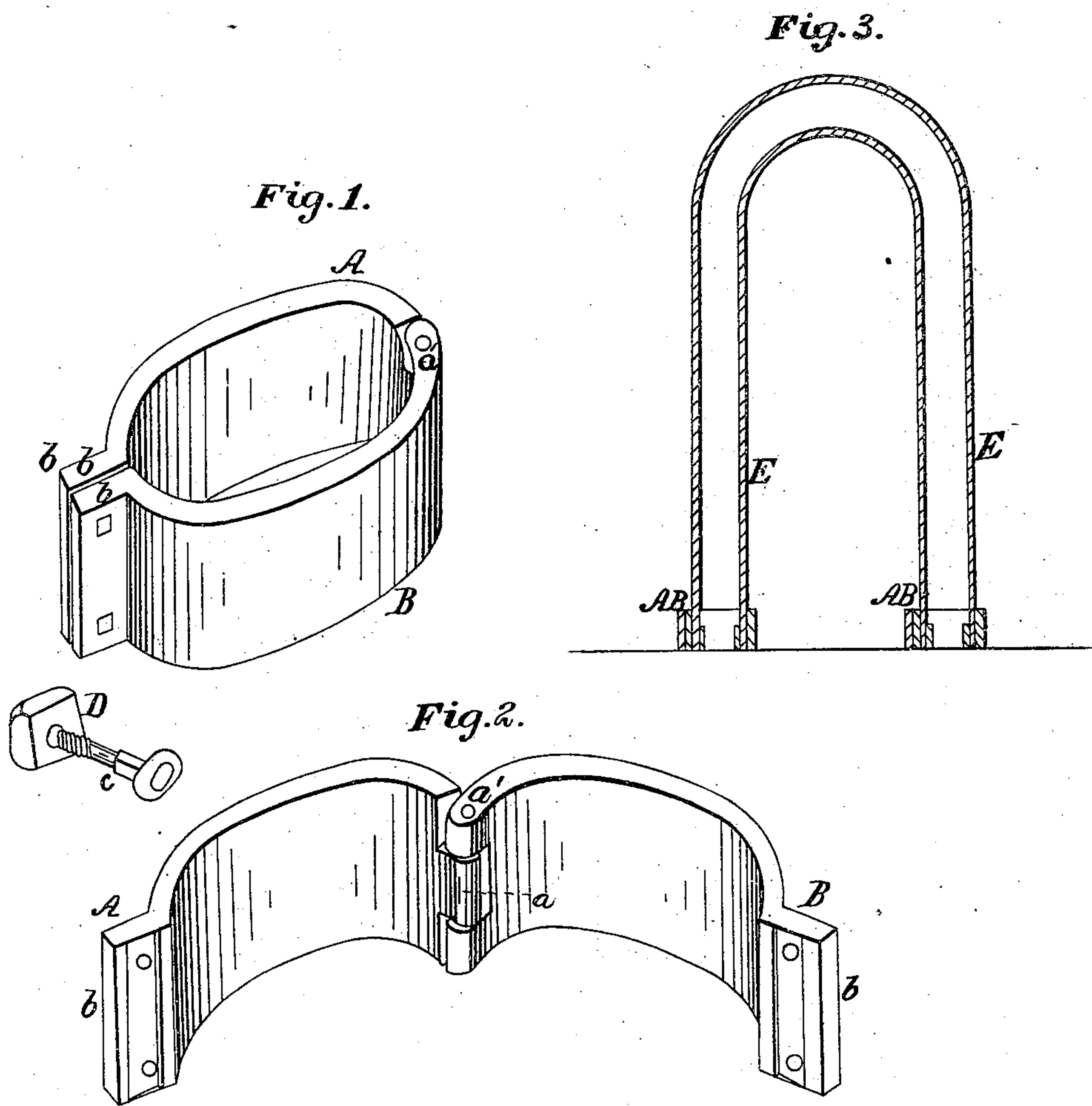


H. McCULLAUGH.
Collar for Furnace Pipes.

No. 85,392.

Patented Dec. 29, 1868.



Witnesses:

L. H. Melling
E. D. Roath

Inventor:

Henry McCullaugh



HENRY McCULLAUGH, OF MARIETTA, PENNSYLVANIA.

Letters Patent No. 85,392, dated December 29, 1868.

IMPROVEMENT IN COLLARS FOR PIPES IN HOT-BLAST FURNACES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, HENRY McCULLAUGH, of Marietta, in the county of Lancaster, and State of Pennsylvania, have invented an Improvement on Collars Used to Secure the Arched Pipes or Siphon-Pipes Employed in Hot-Blast Furnaces; and I do hereby declare that the following is a full and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of the collar closed, showing the holes in the flanges for the headed bolt and screw-nut shown.

Figure 2 shows the same opened, to show the hinge which joins the two segments of the collar.

Figure 3 shows one pair of arched hot-air pipes, to the base of which the collar is applied, to secure the pipes to the neck of the cylinder of the hot oven.

The nature of my invention consists in providing a means by which the collar can be removed from pipes which are either in a leaky condition or burned out, as is the case frequently, without the necessity of cutting out the cement or breaking the collar, as is the case with all collars as now made, cast in one solid piece, and weighing from forty to one hundred pounds each, which causes a great loss in time and material, which, by my invention, is obviated, and the same collar can be used and the pipes replaced a number of times.

In order to enable others to make and use my invention, it is not necessary for me to explain the system of arched-pipe apparatus set in a kind of oven, with its flues, &c., as the hot-air blast proceeds to the

furnace in a red heat, as such is not a part of my invention.

The novelty consists in casting the collars used, in two parts, forming a knuckle-hinge, as shown by fig. 2, on one side, and the other side being provided with a projecting flange, and secured to each other by a clamp or headed screw-bolts.

A shows one section of the collar; B, the other; CD, the headed bolt and screw-nut.

The great annoyance and loss of time to remove the collars heretofore in use, when cast in a solid single piece, and the necessity to break them, and throw them aside as old metal, led me to invent a means that will save the collar, and at the same time facilitate the removal of injured pipes.

This I accomplish by making the collars in two parts, united at one end by a jointed hinge and pintle, and at the other end by clamps or screw-bolts, as shown.

I am not aware that collars of this kind and for this purpose have ever been known or applied.

I am aware of the patent of C. Perley, February 24, 1863, for improved hose-coupling, but his device differs from mine in construction, and I do not claim them; but

What I do claim, is—

The herein-described collar, for coupling or protecting hot-air pipes in blast-furnaces.

HENRY McCULLAUGH.

Witnesses:

D. H. MELLINGER,
E. D. ROATH.