

W. Smith,

Core Barrel.

No. 111,091.

Patented Jan. 17, 1871.

Fig. 4.

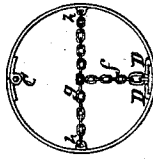


Fig. 5.

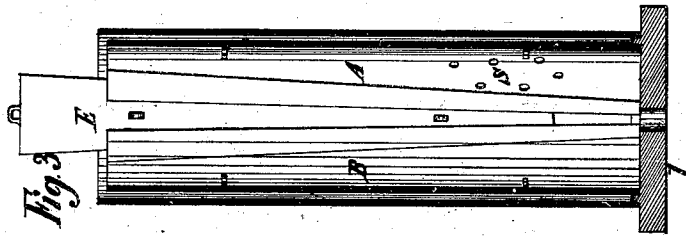
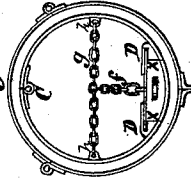


Fig. 3.

Fig. 2.

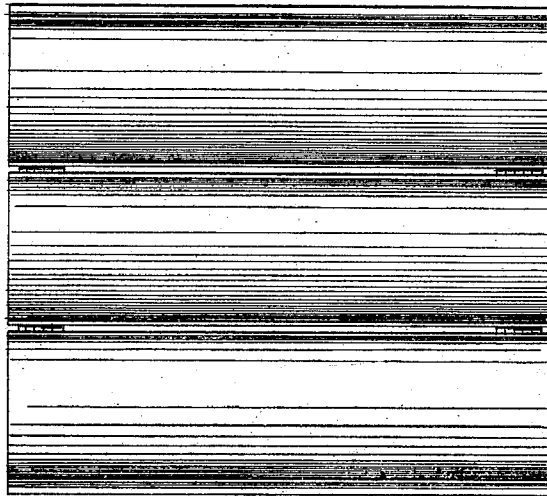
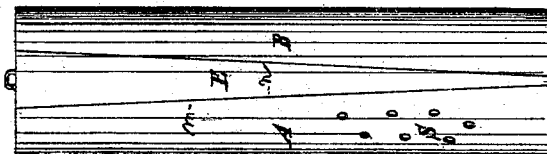


Fig. 1.



Witnesses

A. L. Johnston

James L. Johnston

Inventor

William Smith

United States Patent Office.

WILLIAM SMITH, OF PITTSBURG, PENNSYLVANIA.

Letters Patent No. 111,091, dated January 17, 1871.

IMPROVEMENT IN COLLAPSING CORE-BARRELS.

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, WILLIAM SMITH, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in "Collapsing Core-Barrel;" and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon.

The nature of my invention consists in a core-barrel constructed in sections, two of which are hinged together and held to the desired diameter, through the medium of a wedge-shaped section, and contracted or collapsed by drawing the wedge-shaped section endwise.

To enable others skilled in the art to make and use my invention, I will proceed to describe more fully its construction and operation.

In the accompanying drawing which forms part of my specification.

Figure 1 is a side and vertical elevation of my improvement in collapsing core-barrel.

Figure 2 represents a vertical elevation of an ordinary "core-box," when opened out.

Figure 3 is a vertical section of the core-barrel and its box when arranged on a base preparatory to ramming the sand around the barrel.

Figure 4 is an end view of the core-barrel.

Figure 5 is an end view of the core-barrel and its box.

In the accompanying drawing—

A and B represent the two main sections of the core-barrel, and are hinged at C, as shown in figs. 4 and 5, and are also provided with slides or grooves, as indicated at D, in which move tongues X of the wedge-shaped section E.

To the back or inner side of the section E are attached two chains, f, which are connected to two chains g, which are attached to the sections A and B at h.

The wedge-shaped section E has three parts inclined, to wit, the two edges and the inner side. This is clearly indicated in figs. 1, 4, and 5.

This arrangement of inclines will cause the edges m of sections A and B to press against the edges n of section E, when drawing it endwise for the purpose of collapsing the core-barrel.

In preparing the core, the several sections of the core-barrel are arranged with the wedged section E in the position between the sections A and B, as shown in fig. 1.

The core-barrel is then placed on the base l, and the core-box placed around it, as shown in fig. 3. The sand is then rammed around the core-barrel in the usual manner.

The core-barrel may be constructed of wrought or cast-iron, and should be furnished with perforations or vent-openings, as indicated at S.

The core-barrel is collapsed by drawing the wedge-shaped section E endwise, as indicated in fig. 3, which, drawing on the chains f and g, will draw the sections A and B in, so as to contract or diminish the diameter of the core-barrel that it may with ease and facility be withdrawn from the pipe or other casting.

By making the surface of the core-barrel without the openings S, and giving the wedge-shaped section a greater inclination on the parts described, and coating the core-barrel with a suitable material, it may be used as a hollow metallic core, the advantage of which will be apparent to the skilled molder and manufacturer of pipe and other tubular castings.

Having thus described the nature, construction, and operation of my improvement,

What I claim is—

A core-barrel, one section of which is provided with three inclinations and moves in slides or grooves, and connected to the other sections of it by means of chains or their equivalent, the whole being so constructed and arranged that, by drawing endwise the sections with three inclinations, it will collapse or diminish the diameter of the core-barrel, as herein described.

WILLIAM SMITH.

Witnesses:

A. C. JOHNSTON,
JAMES J. JOHNSTON.