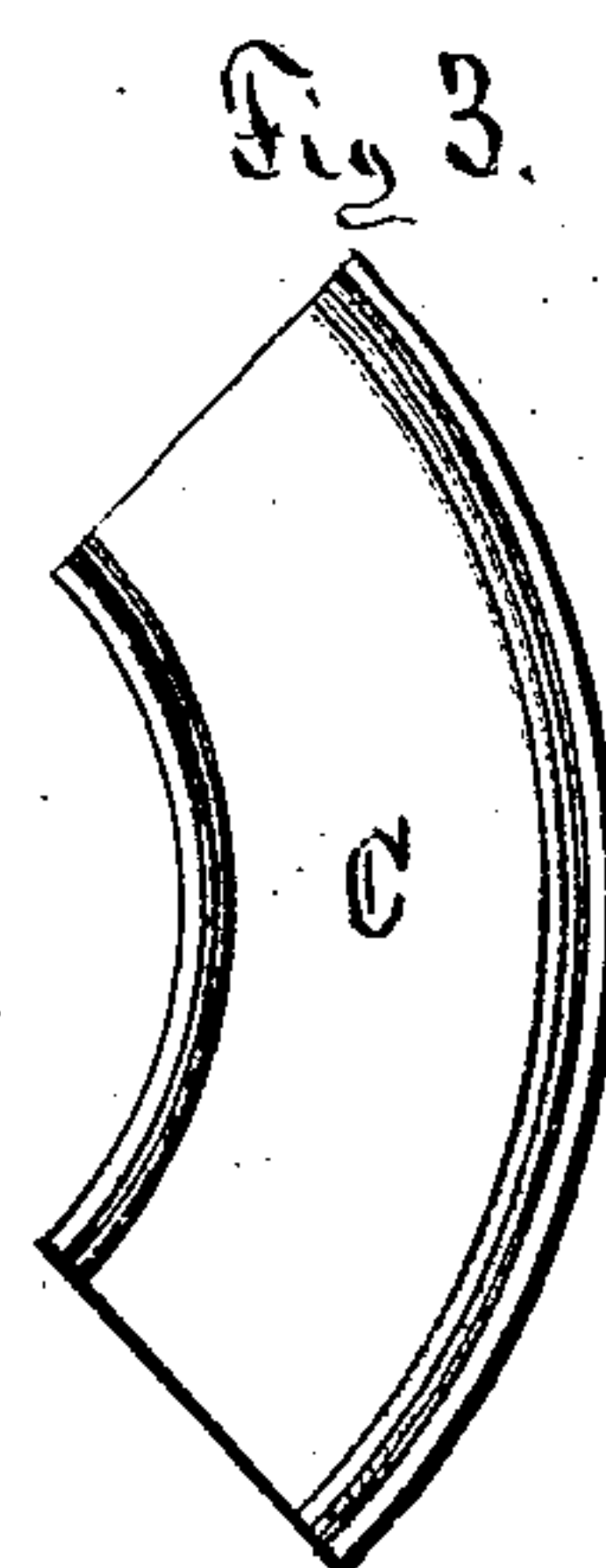
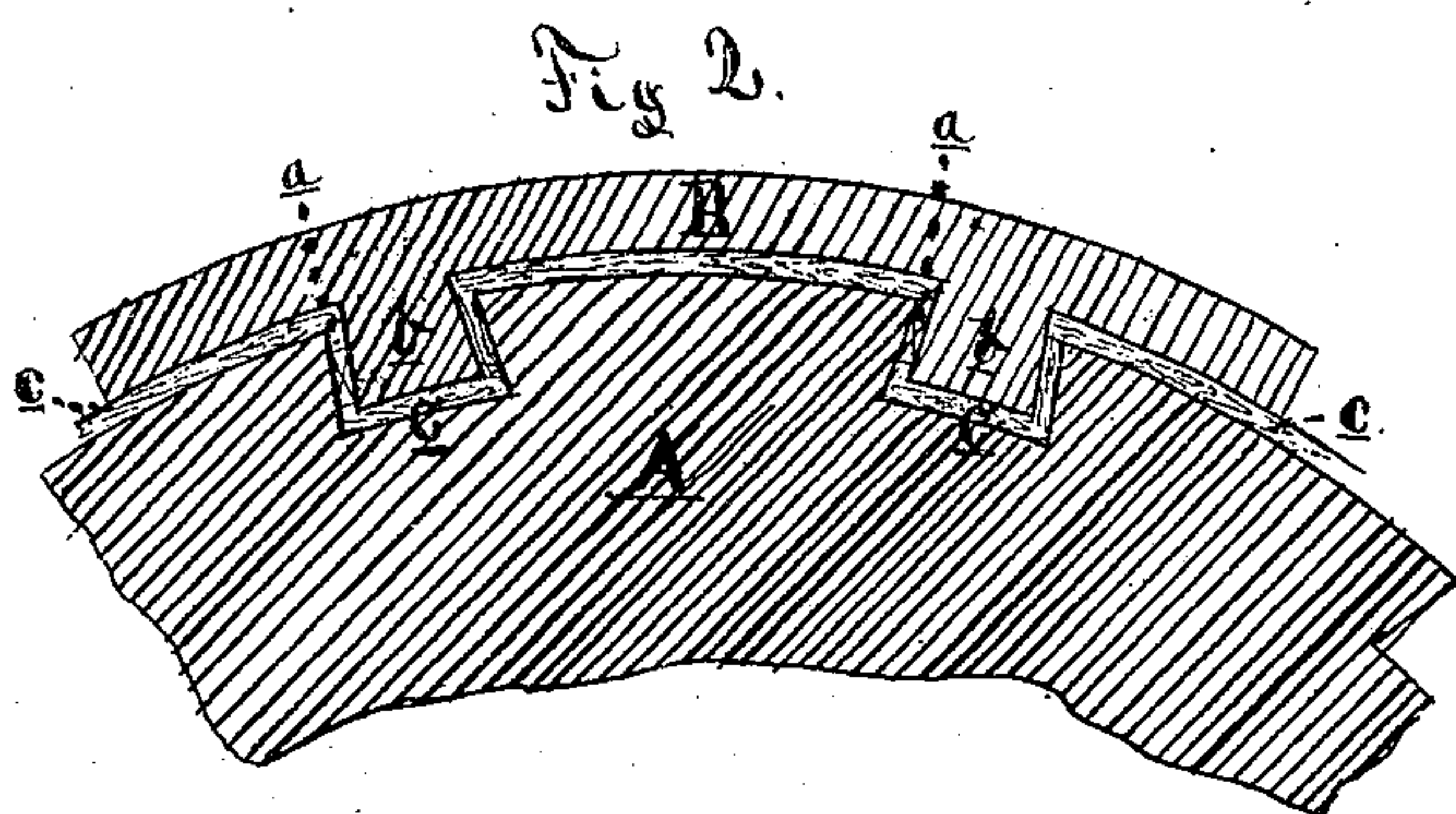
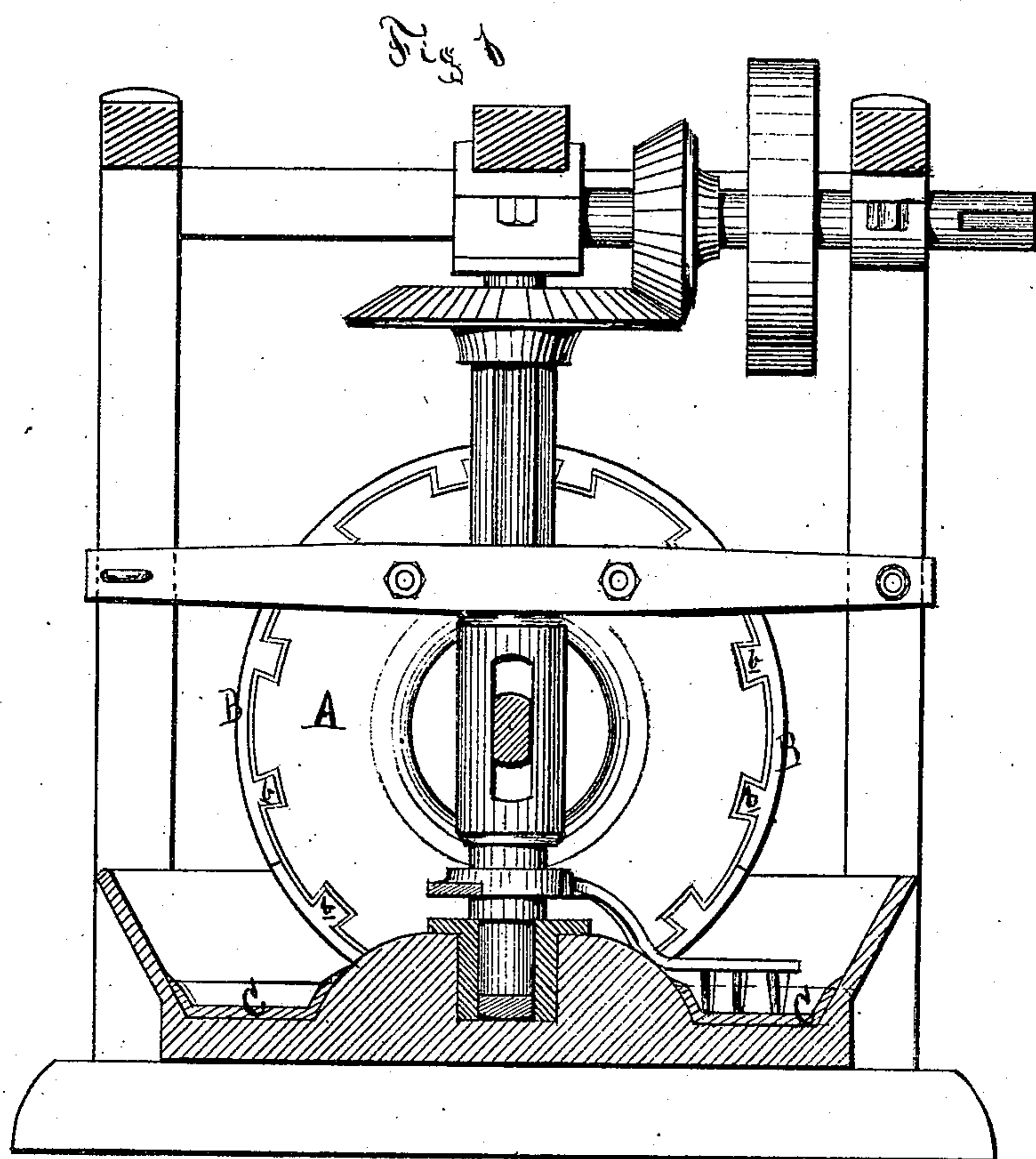


T. PUGH.

Ore Mill.

No 98.297.

Patented Dec. 28, 1869.



Witnesses:

H. C. Sprague  
D. L. Carmichael

Inventor:

Theophilus Pugh

# United States Patent Office.

THEOPHILUS PUGH, OF CHICAGO, ILLINOIS.

*Letters Patent No. 98,297, dated December 28, 1869; antedated August 7, 1869.*

## IMPROVEMENT IN PULVERIZING-CHASERS.

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

*To whom it may concern :*

Be it known that I, THEOPHILUS PUGH, of Chicago, in the county of Cook, and State of Illinois, have invented a new and useful Improvement in Chasers, for pulverizing minerals, rock, and other substances; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, and being a part of this specification, in which—

Figure 1 is a sectional elevation of my improvement;

Figure 2 is a detached section of a segment of my improved tire, showing the method of attaching and securing the same to the chaser; and

Figure 3 is a plan of one of the pan-segments.

Like letters refer to like parts in each figure.

The nature of this invention relates to an improvement in the construction of that class of mills known as "chasers," for pulverizing ores, quartz, and other substances, and consists in the combination and arrangement of the several parts of the crushing-wheel, consisting of chilled-iron tires in sections, provided with dovetails, for the purpose of engaging in proper slots in the main wheel, the wheel and tire being separated in all parts by a layer of wood, and secured firmly together by metallic wedges.

In the drawings—

A represents one of the chasers, consisting of a heavy cast-iron wheel, provided with dovetail slots, in which are inserted the dovetail lugs *b* of the segments B. These segments are of chilled iron on their outer surfaces, which enables them to resist the great abrasive action to which they are subjected. The lugs are secured in the slots by keys *a*, but, between the

exterior surface of the wheel and the interior surface of the segments is interposed a backing of wood, *c*, which serves as a cushion to prevent the impact of the tire, upon the material being crushed, from being transferred to the wheel A. The elasticity of this backing also serves to prevent breakage of the segment.

In the bottom of the groove or pan in which the chasers travel, I place a false bottom, composed of four or more closely-fitted segments C. These segments are chilled plates, cast in the proper shape. In the construction of a mill of this class, the bed containing the circular groove is cast in one piece, and, from its size and shape, compels the employment of a soft iron to prevent cracking in cooling; hence, it soon wears out. By the use of the chilled segments, a hard surface is presented to the action of the chasers, whose destructive action they will resist for a long time. When worn, they are easily replaced, at a small cost.

I do not pretend that the wheel A, the segmentary tire B, the wooden backing *c*, or the wedges *a*, are of themselves new, and I do not claim either of them broadly; but

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination and arrangement of the wheel A, the tire B, the wooden backing *c*, and the wedges *a*, when constructed and operating as and for the purposes above set forth and shown.

THEOPHILUS PUGH.

Witnesses:

H. F. EBERTS,  
H. S. SPRAGUE.