

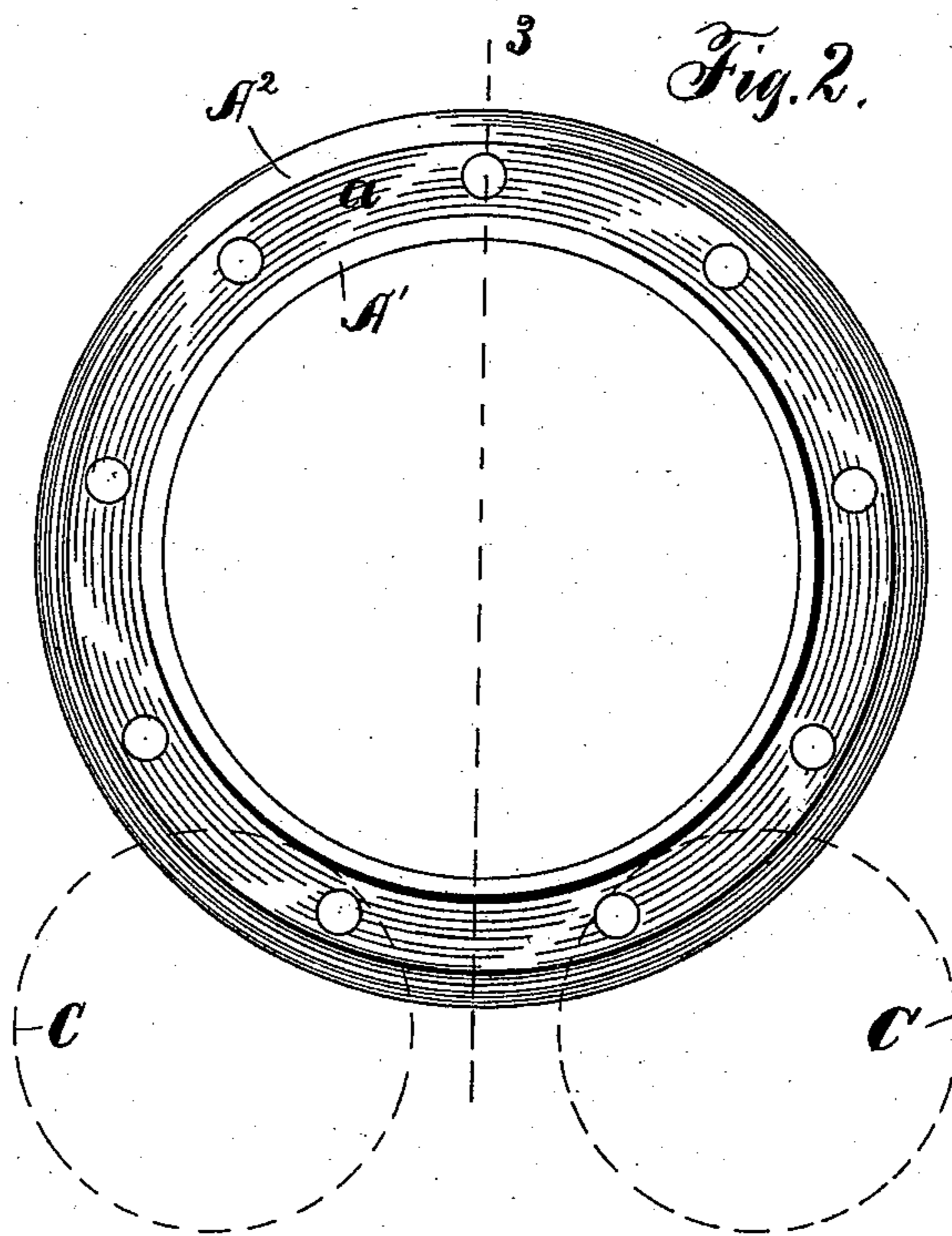
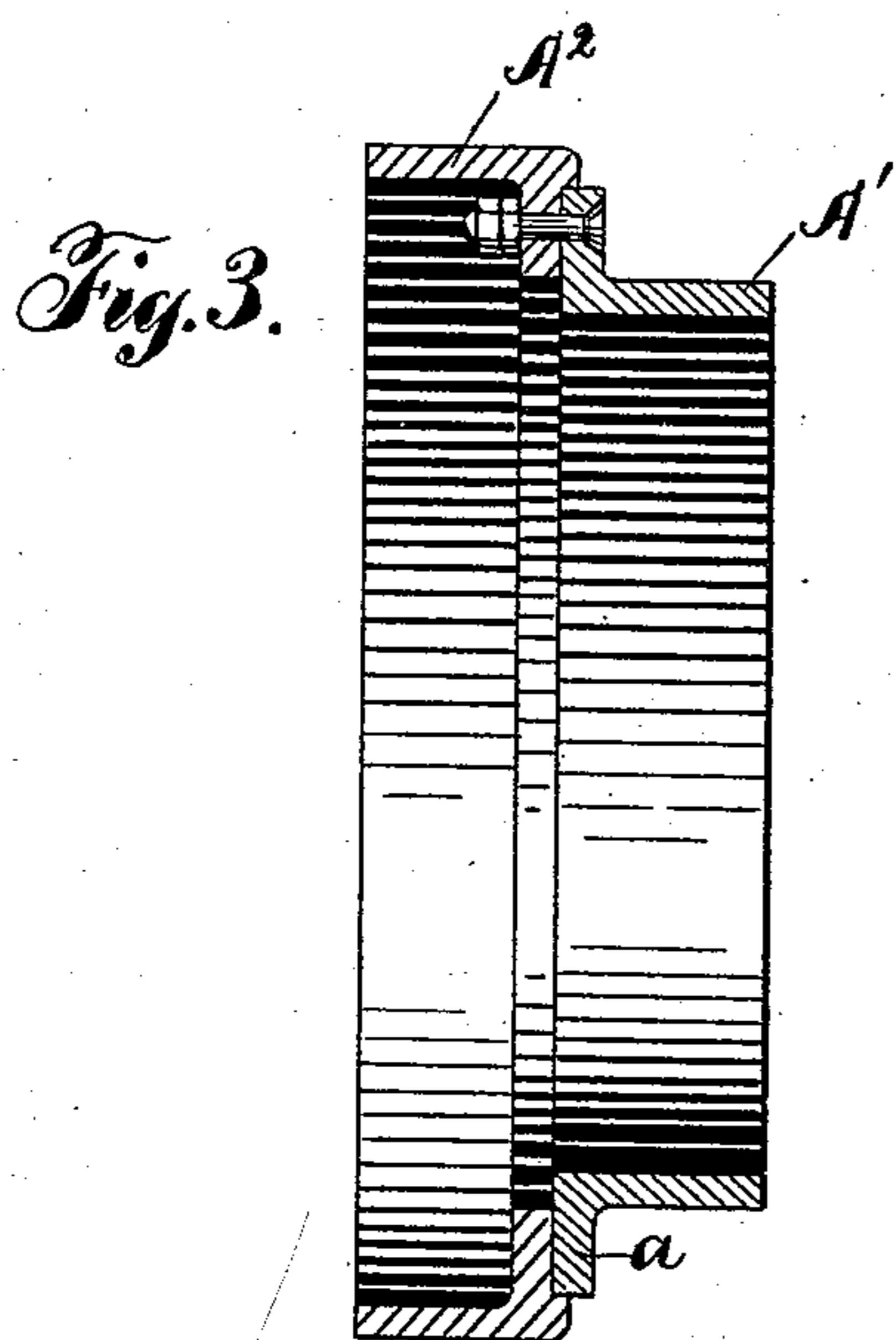
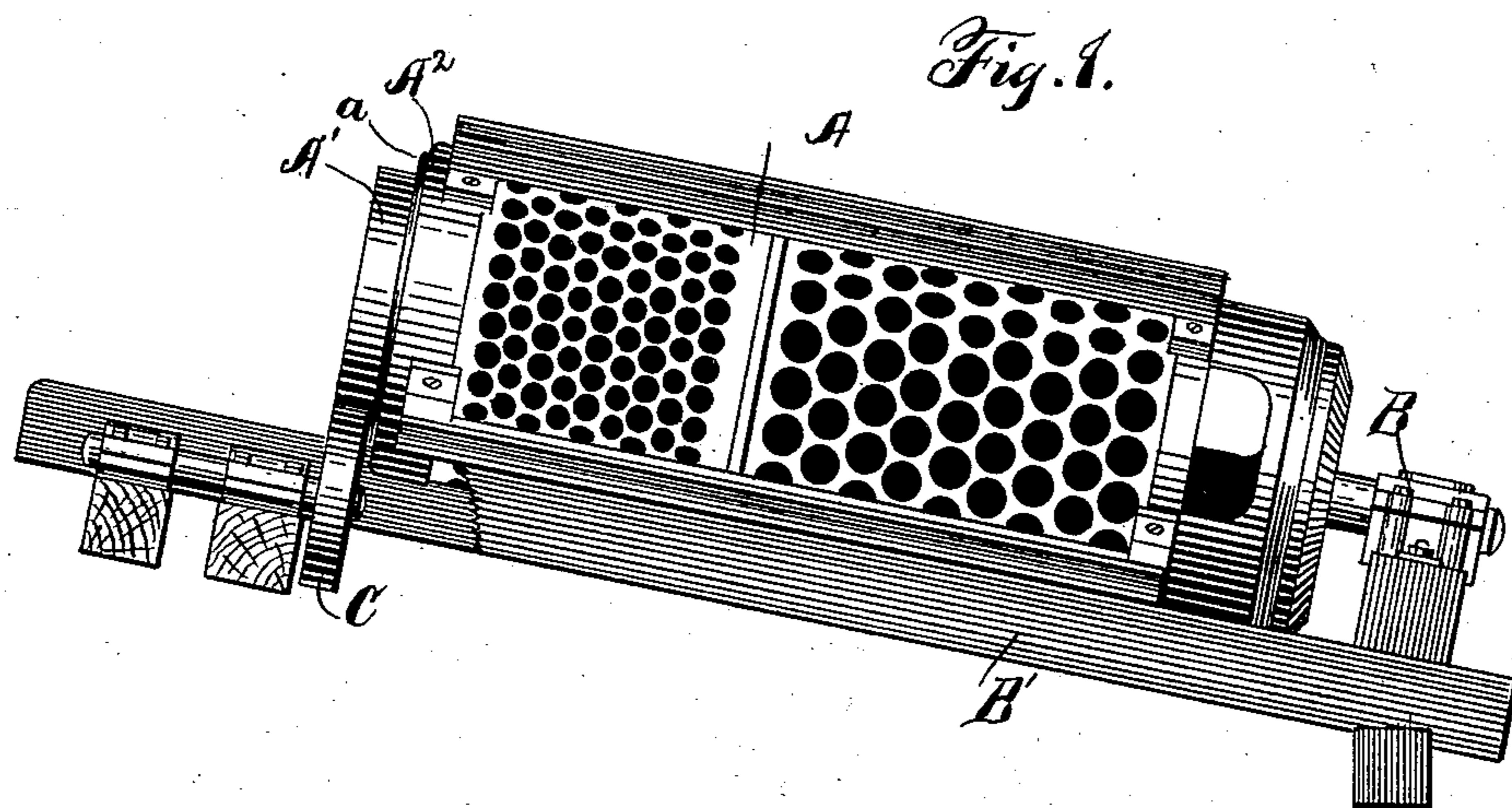
(No Model.)

P. W. GATES.

REMOVABLE TREAD FOR SCREENING AND ASSORTING MACHINES.

No. 488,760.

Patented Dec. 27, 1892.



Witnesses.  
*Samuel C. Hibben* By *Banning & Banning Payson,*  
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Inventor.  
*Philetus Warren Gates.*

# UNITED STATES PATENT OFFICE.

PHILETUS WARREN GATES, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE GATES  
IRON WORKS, OF SAME PLACE.

REMOVABLE TREAD FOR SCREENING AND ASSORTING MACHINES.

SPECIFICATION forming part of Letters Patent No. 488,760, dated December 27, 1892.

Application filed September 22, 1892. Serial No. 446,571. (No model.)

*To all whom it may concern:*

Be it known that I, PHILETUS WARREN GATES, a citizen of the United States, residing in Chicago, Illinois, have invented certain  
5 new and useful Improvements in Removable Treads for Screening and Assorting Machines, of which the following is a specification.

My invention is intended to be an improvement on the screening and assorting machines  
10 shown and described in P. W. Gates' Patent No. 266,282, of October 24, 1882; and it consists in the features and details of construction hereinafter described and claimed.

In the drawings, Figure 1 is a side elevation  
15 of a screening and assorting machine containing my improvement. Fig. 2 is an end view of a removable tread; and Fig. 3 is a longitudinal section of the same, on line 3 of Fig. 2.

In making my improved removable tread, I  
20 use the usual screen and assorter A, supported in suitable bearings B, at one end of the frame B'. Mounted on cross beams at the opposite end of the frame are the rolls C, shown in dotted lines in Fig. 2, so that as the screen and  
25 assorter revolves, it is supported, and the tread revolves, on these rolls C. The tread proper consists of two parts, A' A<sup>2</sup>. A<sup>2</sup> is bolted or secured to the framework of the screen and is made of any soft metal, preferably cast iron,  
30 which can be turned out to contain the flange *a* on the tread A', which is bolted to the ring or part A<sup>2</sup> in any usual manner. It will thus be seen that in using my improved removable

tread, the part A' can be made of chilled cast iron, and if, after using, it has been worn considerably or broken, it can be readily removed  
35 and a new one replaced. In the present form of construction, the pieces A' A<sup>2</sup> are made of one piece of chilled cast iron, but, having to be worked in constructing, it cannot be chilled  
40 very hard, so that even ordinary usage rapidly wears it away, and, when necessary to replace the same by a new one, the entire machine or screen has to be taken down and  
45 apart, thereby causing considerable loss of time and expense, as well as the difficulty attendant on getting it in perfect alignment again.

It will be seen that in making the tread of my improved form the part A<sup>2</sup> can be left soft,  
50 and the tread proper, A', can be made of very hard chilled cast iron or steel.

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

The combination of a screening and assort-  
55 ing machine, a ring A<sup>2</sup> of soft metal, and a tread A' of chilled cast iron or steel removably secured to the same and adapted during the revolutions of the screen to rotate on the  
60 rolls C, substantially as described.

PHILETUS WARREN GATES.

Witnesses:

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