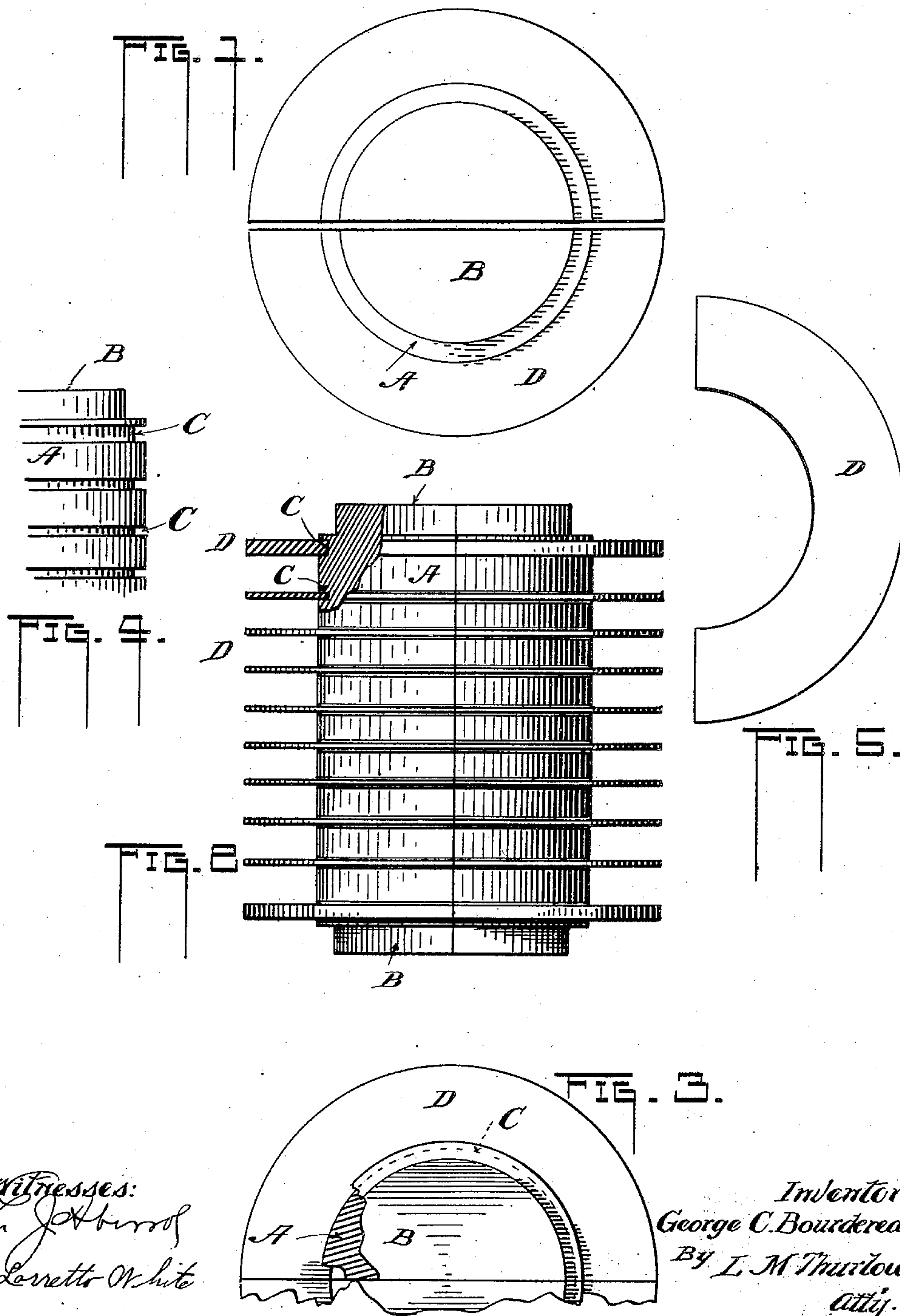


No. 879,942.

PATENTED FEB. 25, 1908.

G. C. BOURDEREAUX.  
PATTERN FOR CASTING CYLINDERS.

APPLICATION FILED JAN. 21, 1907.



Witnesses:  
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att'y.



# UNITED STATES PATENT OFFICE.

GEORGE C. BOURDEREAUX, OF PEORIA, ILLINOIS, ASSIGNOR OF ONE-THIRD TO MELVIN W. SWARTZ AND TWO-THIRDS TO JULIA BOURDEREAUX, BOTH OF PEORIA, ILLINOIS.

## PATTERN FOR CASTING CYLINDERS.

No. 879,942.

Specification of Letters Patent.

Patented Feb. 25, 1908.

Application filed January 21, 1907. Serial No. 353,382.

*To all whom it may concern:*

Be it known that I, GEORGE C. BOURDEREAUX, citizen of the United States, residing at Peoria, in the county of Peoria and State of Illinois, have invented certain new and useful Improvements in Patterns for Casting Cylinders; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in patterns for casting gas-engine cylinders, the object being to provide a pattern by means of which the mold for use in casting extremely wide cooling-flanges for cylinders may be quickly, readily and easily made.

In the accompanying drawing, Figure 1 is a top view of two halves of the pattern. Fig. 2 is an elevation of the halves showing the line of division. Fig. 3 is a partial top view of the halves in part section. Fig. 4 is an elevation of a portion of one of the pattern sections showing a series of grooves; Fig. 5 is a top view of flange section.

The body of the pattern is a half cylinder designated by the reference letter A, which is sufficient in itself to make the desired complete cylinder-mold as will be understood presently, but I have shown both halves in order to make the pattern more readily understood, and also to show the form of the cylinder to be cast therefrom, and of which said pattern is an exact counterpart. Said half cylinder is provided at each end with a core-print B and also with a series of grooves C, Fig. 4, extending around the body concentric with the curved periphery thereof. A series of semi-circular flat flanges D are provided whose inner curved edges coincide with the curves at the bottom of the grooves D, and in which grooves the flanges are adapted to seat. These flanges are of any desired number, and of any width of measurement from the periphery of the body outward to their edges. The ends of the flanges are flush with the flat surface of the body, when assembled, as shown in Fig. 1, so that in the sand of the flask the said flat surface and flange-ends can be positioned flush with the surface of the sand in the full flask.

In use the body A is placed within a flask with its flat surface lying upon the bottom thereof with the flanges all in place in their grooves. The sand is then filled in around

and upon the assembled pattern thus located and tamped firmly in place in the usual manner, after which when covered by a board the flask is inverted. What has up to this time been the bottom of the flask, or the part on which the pattern rested, is now the top, and is removed from the flask exposing the flat surface of the body A the ends of the flanges and the sand surface. By any of the usual methods the body is then lifted out of the flanges and sand, leaving the flanges still in the sand, after which each flange is separately and independently lifted from the sand, leaving the complete and perfect print of half of the cylinder. Another flask similarly treated when placed upon the first, with a core to rest in the print left by the core-prints B B, completes the mold which is then ready to receive the metal after the usual preliminary treatment incident to such work. By providing a pattern of this nature there is no limit to the width of the flanges that may be cast, it being practically impossible to make casting of this kind when using a pattern in the form of a unit. This is particularly true when, as in gas-engine cylinders, a series of flanges of considerable width are to be provided. The reason is that the molder cannot lift the pattern out of the sand in a perfectly horizontal position so as not to break down the sand built up between the flanges. To those familiar with such work this fact is well known. But by having the separate flanges detachable from the body the work can be easily accomplished.

Having thus described my invention I claim:

1. A pattern having a cylindrically curved surface and a series of removable transversely disposed flanges upon such curved surface.

2. A pattern consisting of a cylindrical body having in fixed position upon its convex surface a series of circumferential flanges, the whole being divided in an axial plane and each half cylinder being readily separable from its flanges by movement perpendicular to its axis.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE C. BOURDEREAUX.

Witnesses:

LUTHER C. HINCKLE,  
SADIE FRIEDMAN.