

EDWIN NORTON.

Improvement in Dies for making Blanks for Stovepipe Elbows.  
No. 121,807.

Fig. 1. Patented Dec. 12, 1871.

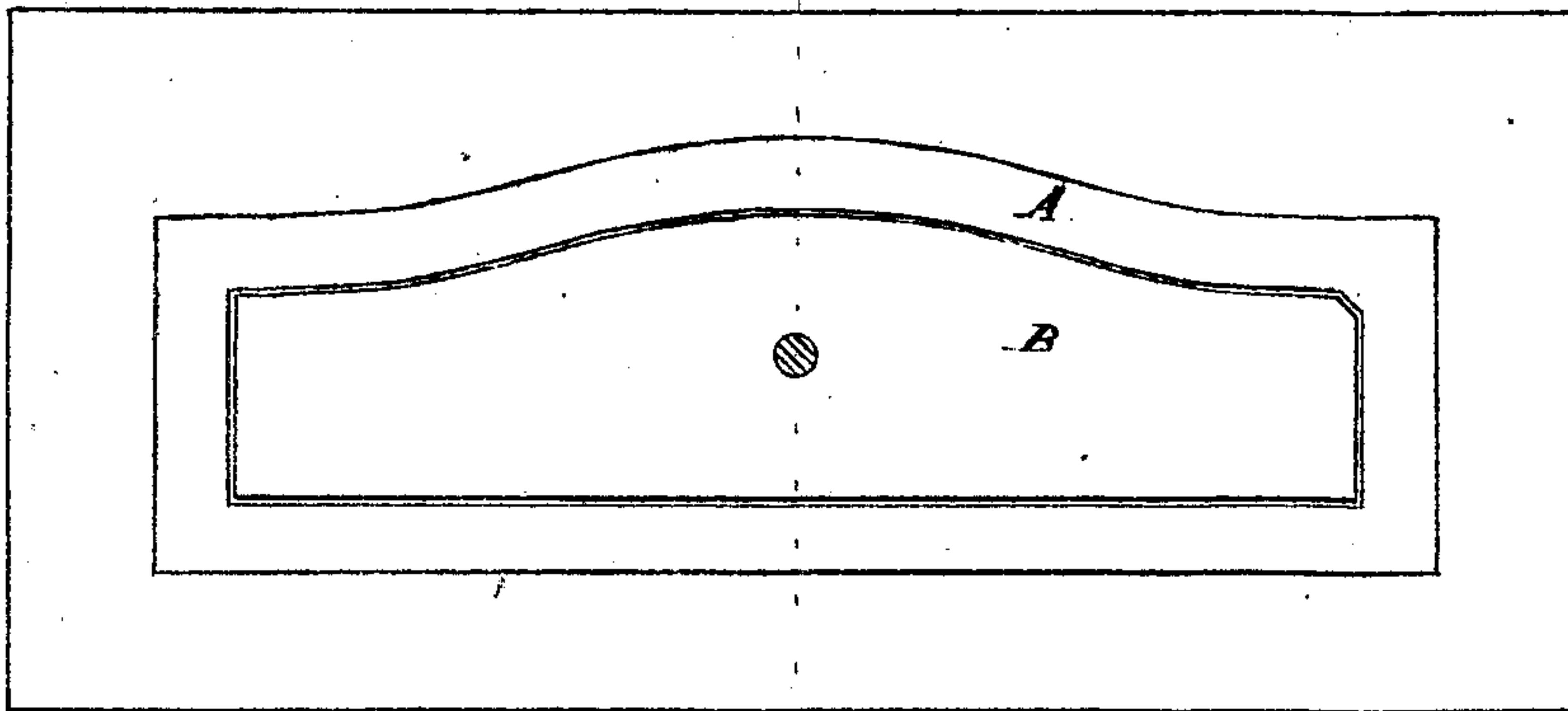


Fig. 2.

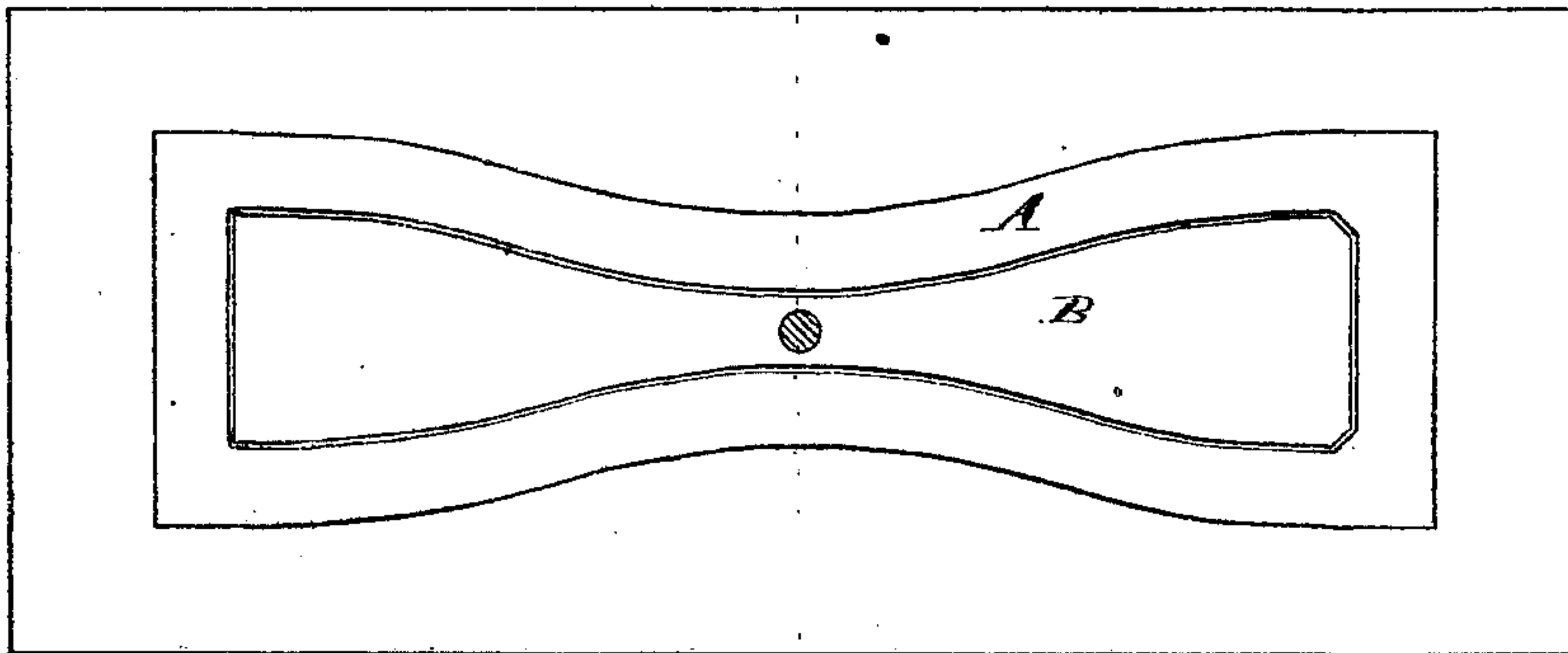
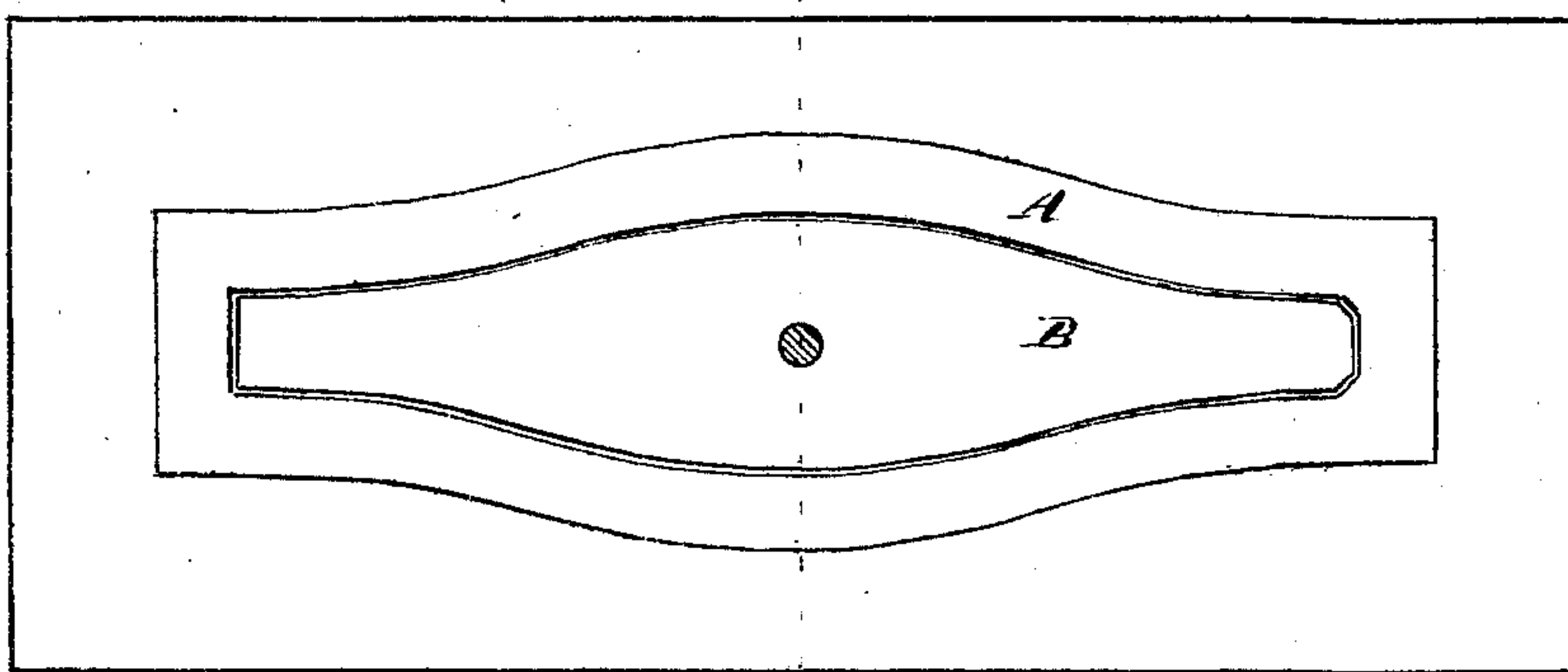


Fig. 3.



*Witnesses*  
Charles L. Parrish  
Franklin Parrish

*Inventor*  
Edwin Norton  
by atty  
Charles L. Parrish

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Fig. 4.

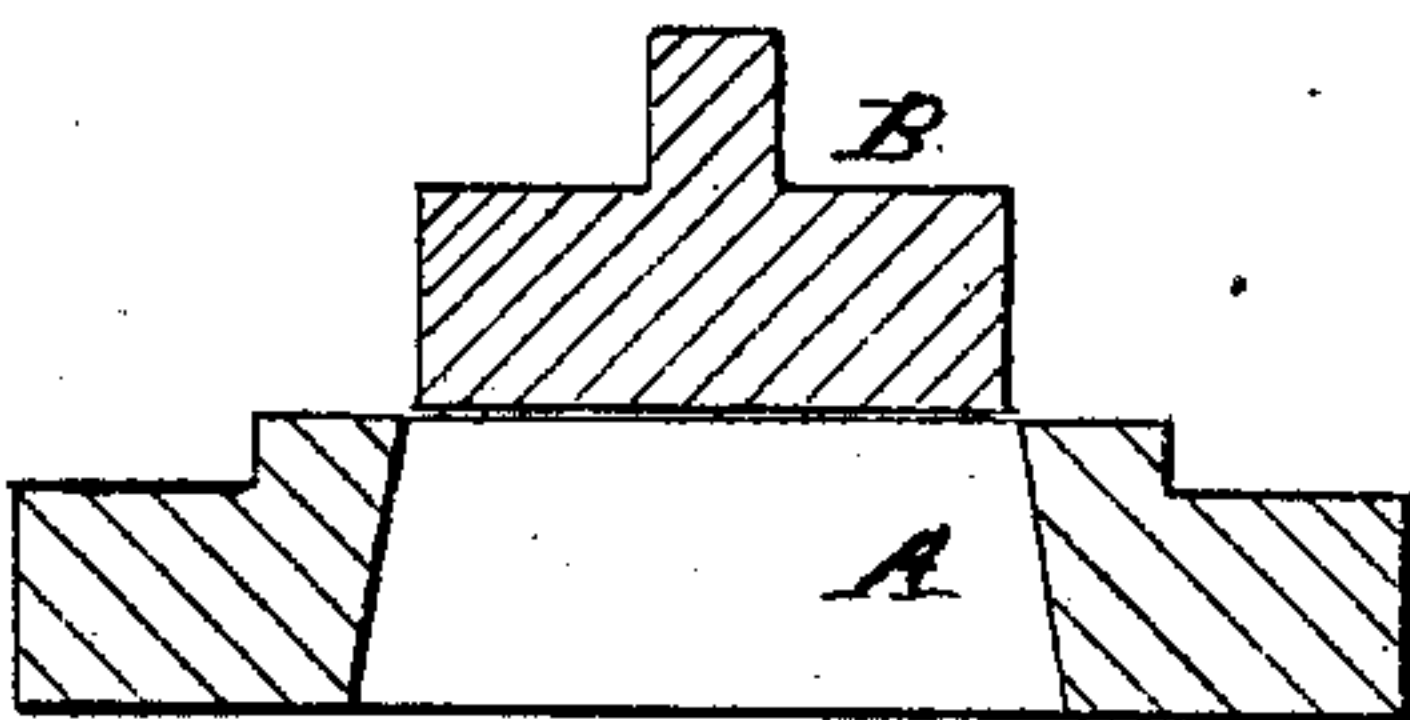


Fig. 5.

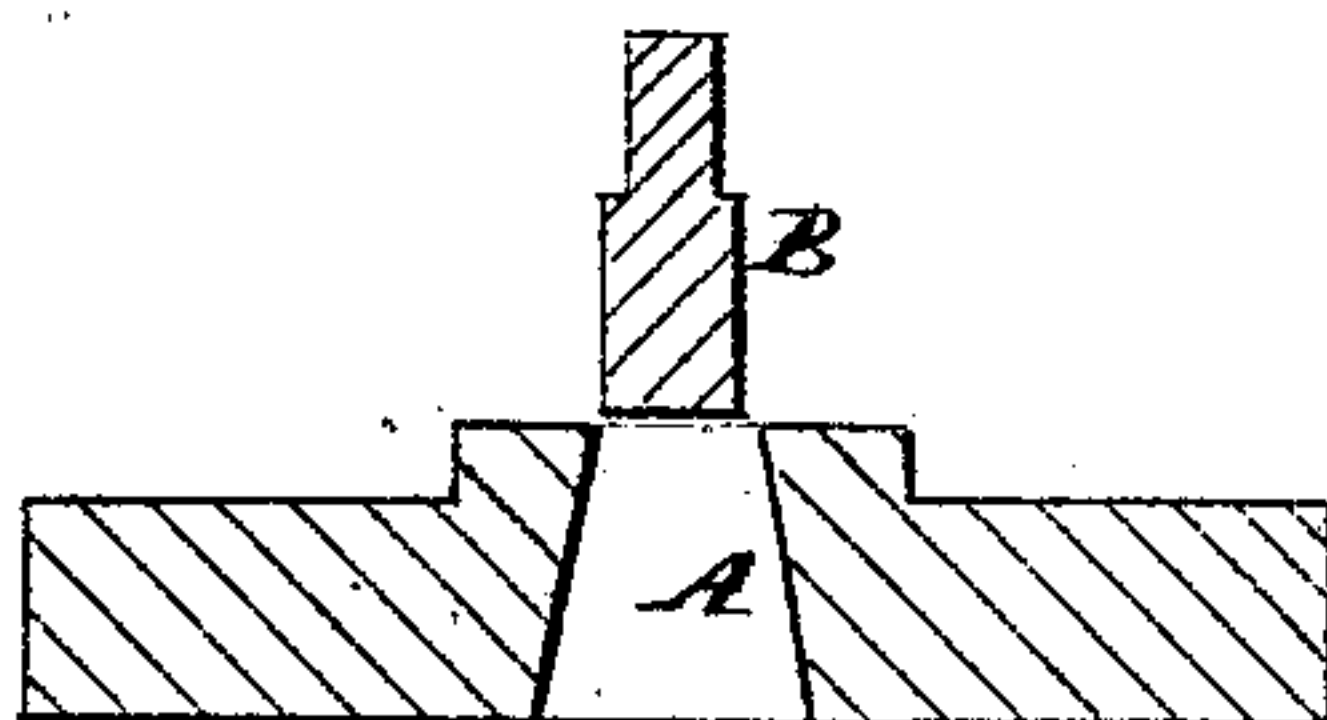


Fig. 6.

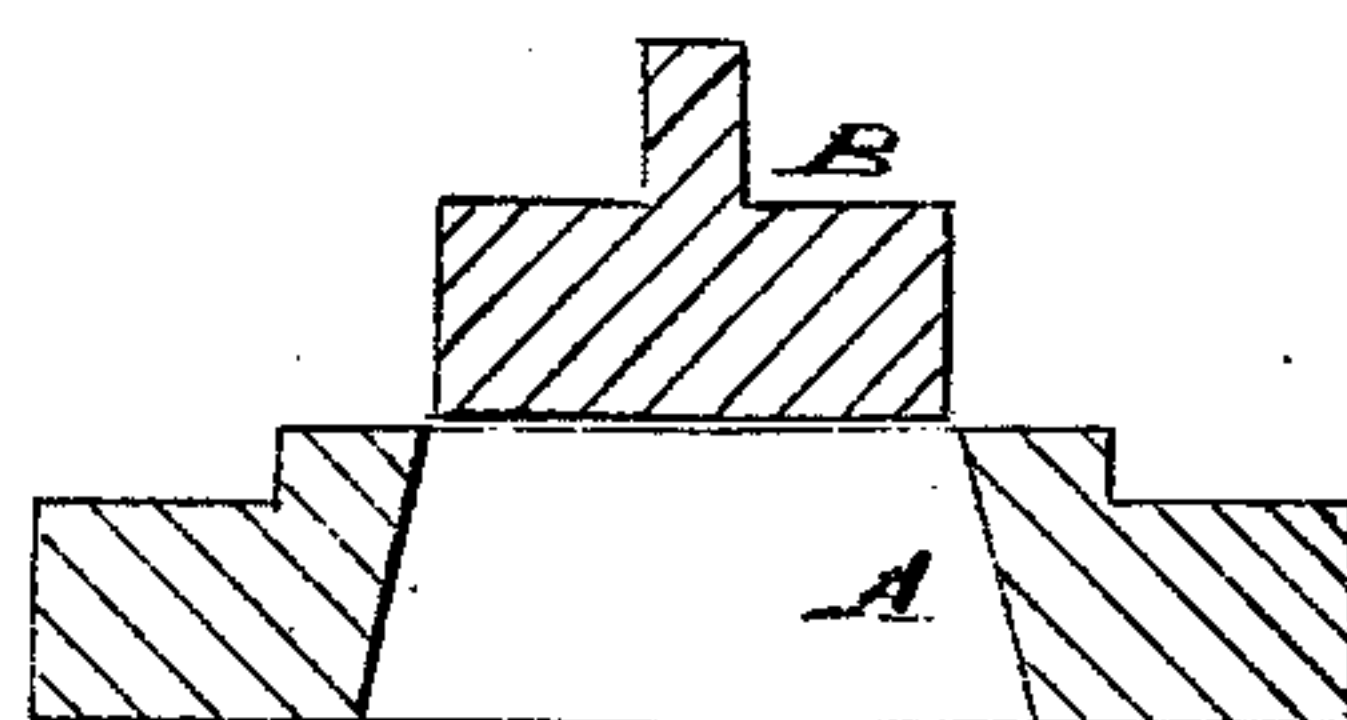


Fig. 7.

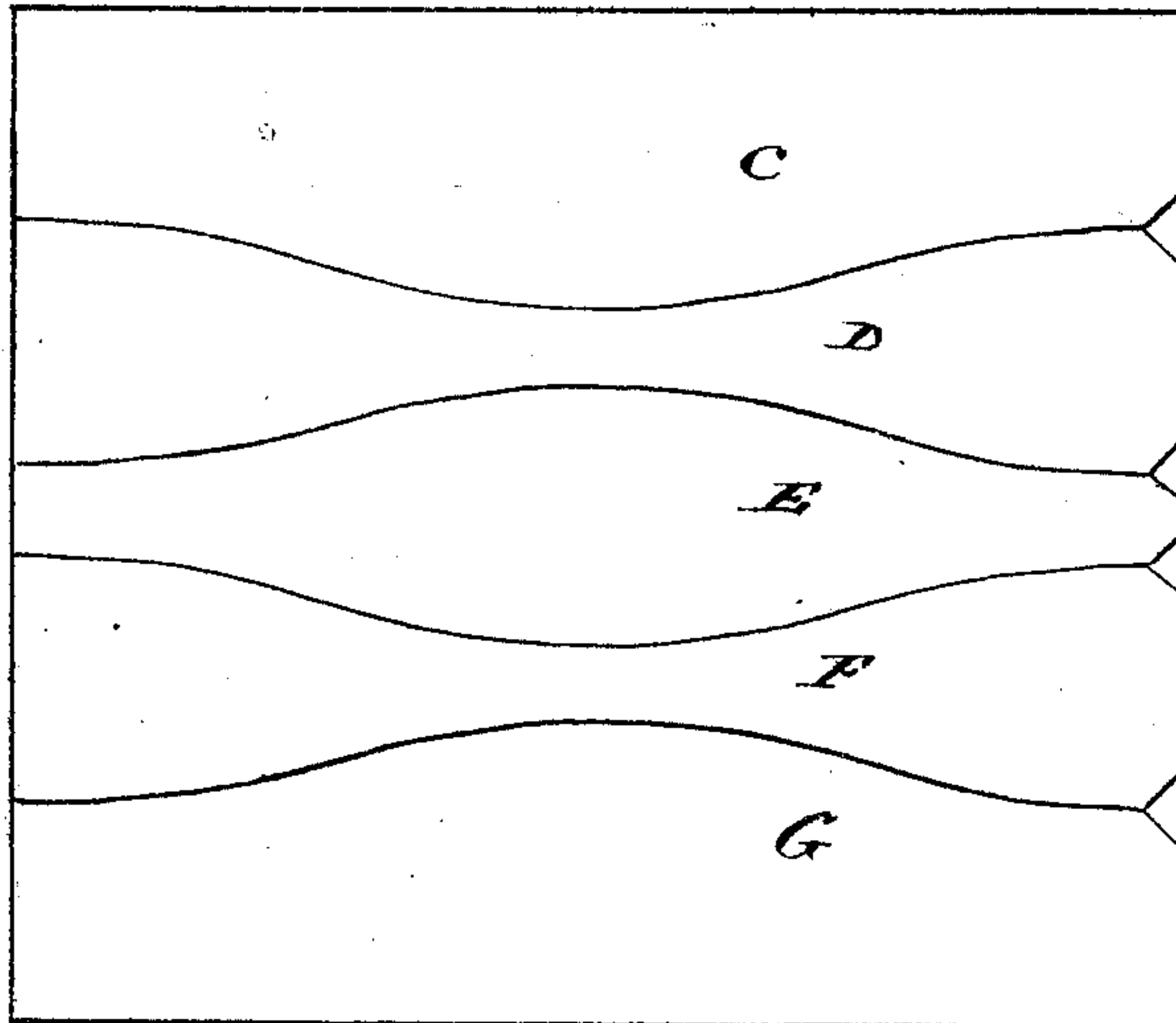
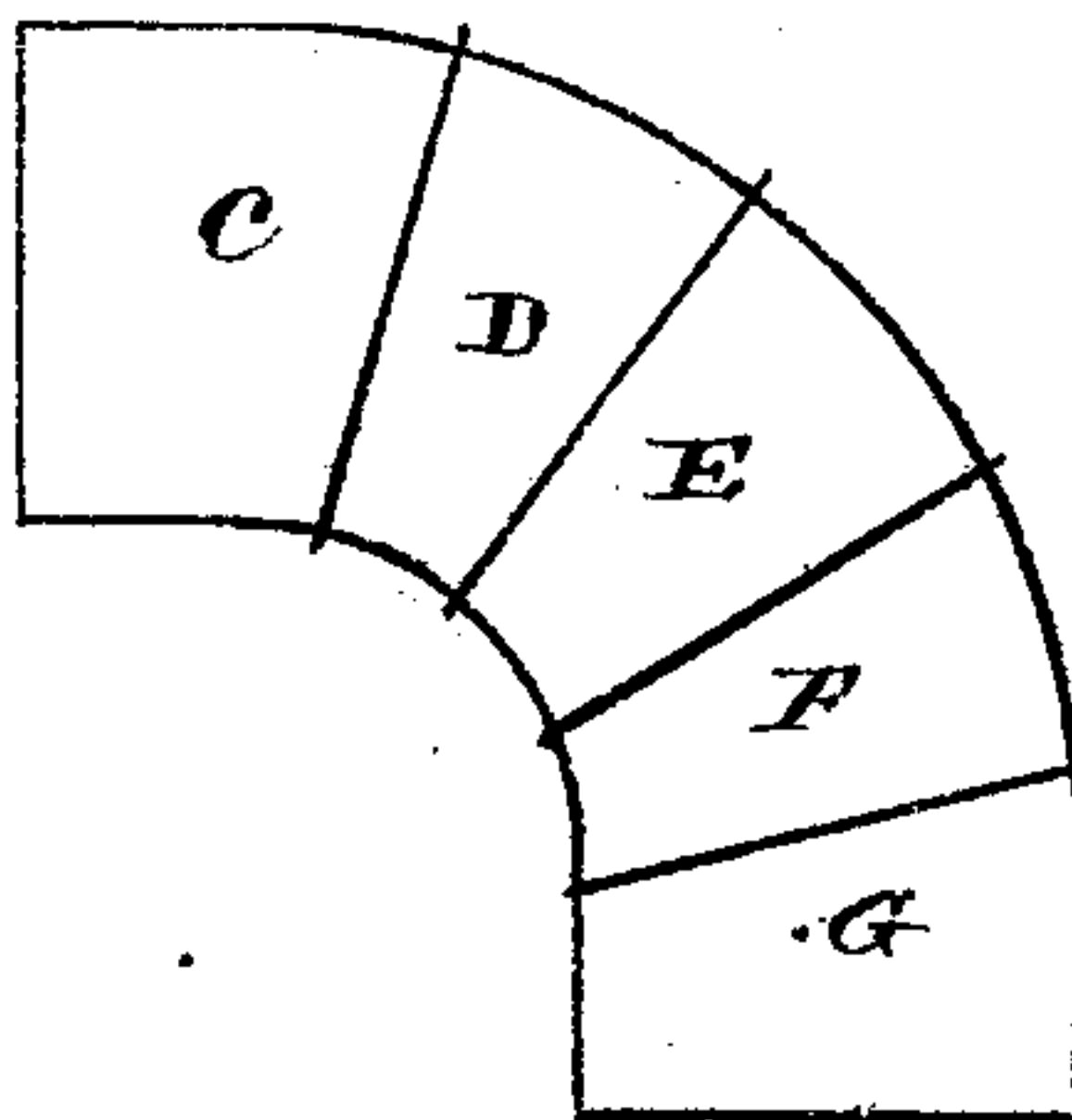


Fig. 8.



Witnesses  
Charles L. Barrick  
Franklin Parrott

Inventor  
Edwin Norton  
by atty  
Charles L. Barrick

# UNITED STATES PATENT OFFICE.

EDWIN NORTON, OF CHICAGO, ILLINOIS.

## IMPROVEMENT IN DIES FOR MAKING BLANKS FOR STOVE-PIPE ELBOWS.

Specification forming part of Letters Patent No. 121,807, dated December 12, 1871.

*To all whom it may concern:*

Be it known that I, EDWIN NORTON, of Chicago, State of Illinois, have invented a certain new and useful Improvement in Dies for Cutting Sheet-Metal Blanks for Curved Elbows for Stove-Pipes and other purposes; and I do hereby declare the following to be a full description of the same, reference being had to the accompanying drawing forming a part of this specification, the same letters of reference, wherever they occur, referring to like parts.

Figures 1, 2, and 3, Sheet 1, are plan views of the dies for cutting the blanks to form the elbow. Figs. 4, 5, and 6, Sheet 2, are cut-sectional views of the dies through the line *x x*, Figs. 1, 2, and 3, showing the punch in the position when commencing to cut the blanks. Fig. 7, Sheet 2, represents the sheet of metal as divided by the several dies to form the elbow. Fig. 8, Sheet 2, is a representation of the five blanks of metal as put together to form the curved elbow.

A represents the matrix or base of the dies, and B the punches or cutting-tools. They are made of steel and have their faces or cutting-edges hardened so as to cut the blanks of metal from the sheet quickly and at the same time with clean and smooth edges. The dies for cutting the necessary blanks to form the elbow are composed of three dependent dies, each die being the complement of the other, and all necessary and dependent upon the other to produce a unified result—that is, cut and shape the several blanks of metal so as to form a curved elbow and at the same time with no waste of metal. In the die, Fig. 1,

Sheet 1, is cut the blank C, Figs. 7 and 8, Sheet 2; in the die, Fig. 2, Sheet 1, is cut the blank D, Figs. 7 and 8, Sheet 2; and in the die, Fig. 3, Sheet 1, is cut the blank E, Figs. 7 and 8, Sheet 2. These blanks, when joined together, as shown in Fig. 8, make the half of the elbow, the other half thereof being made by the joining together the blanks F and G, the duplicates of the blanks C and D. It will thus be seen that the three dies, in their operations, produce but one result—that is, cut and shape five blanks of metal to form a curved elbow for stove-pipes and other purposes.

The machinery and presses for operating the dies being common and well known, I do not deem it necessary to give a particular description of them.

Having now described my invention, I will set forth what I claim and desire to secure by Letters Patent of the United States, premising, however, that I do not claim the new article of manufacture of blanks for curved stove-pipe elbows, as that is included in my patent of April 27, 1869; but

What I do claim is—

The dies, Figs. 1, 2, and 3, having the curved cutting-faces, as described, and when used for cutting the blanks of metal C, D, and E, for forming curved elbows for stove-pipes and other purposes.

EDWIN NORTON.

Witnesses:

CHARLES L. BARRITT,  
FRANKLIN BARRITT.

(136)