

M. CRANE.  
Pan for Backing Electrotpe Shells.

No. 207,645.

Patented Sept. 3, 1878.

Fig. 2.

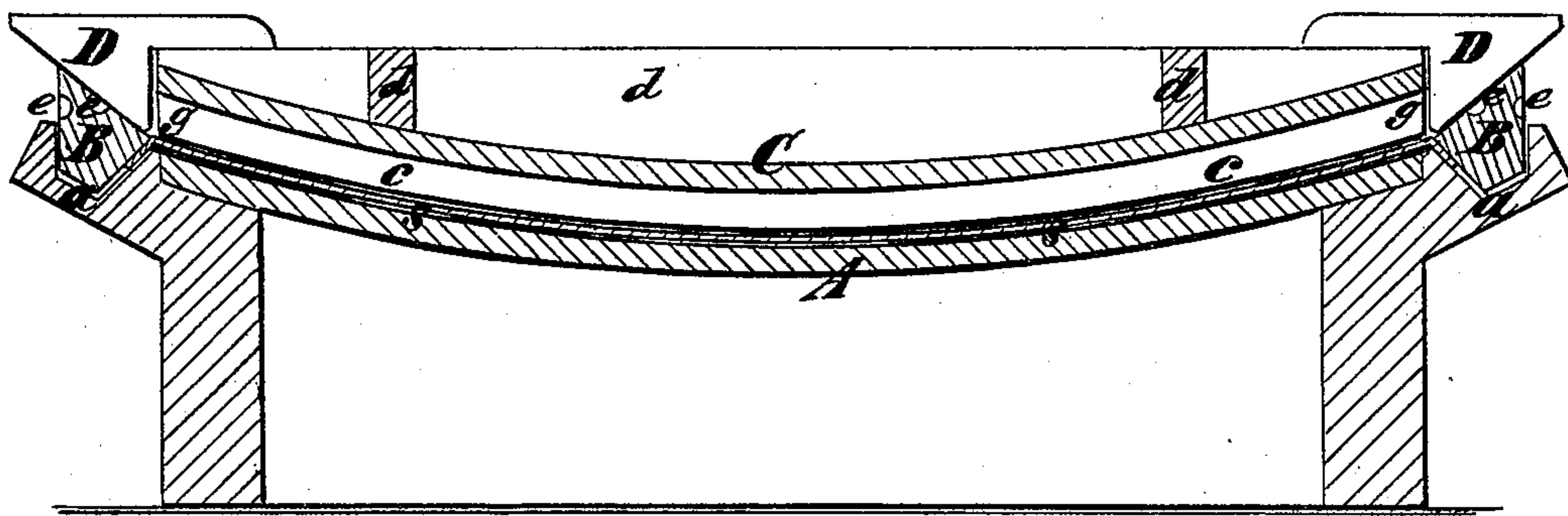


Fig. 1.

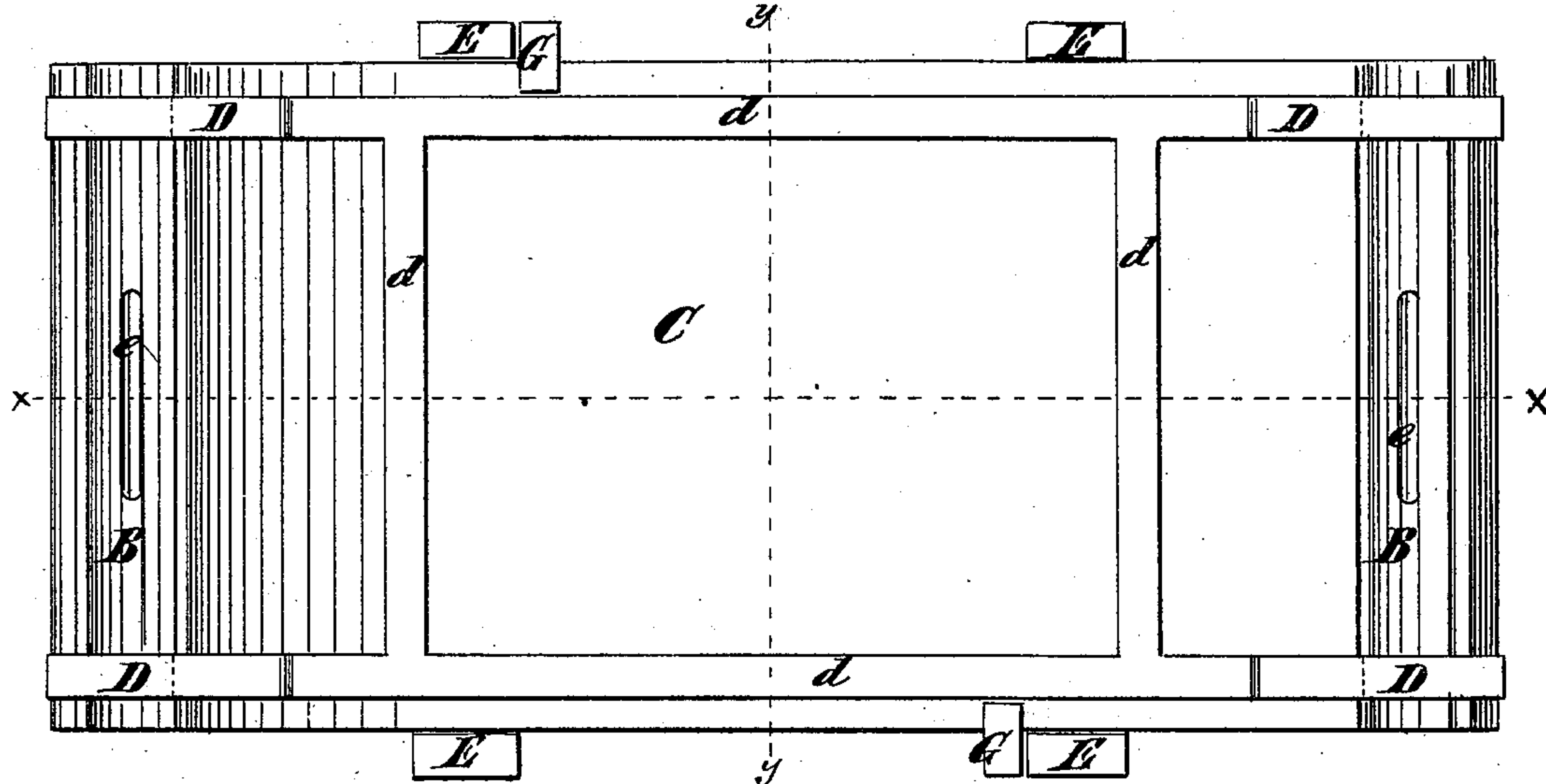
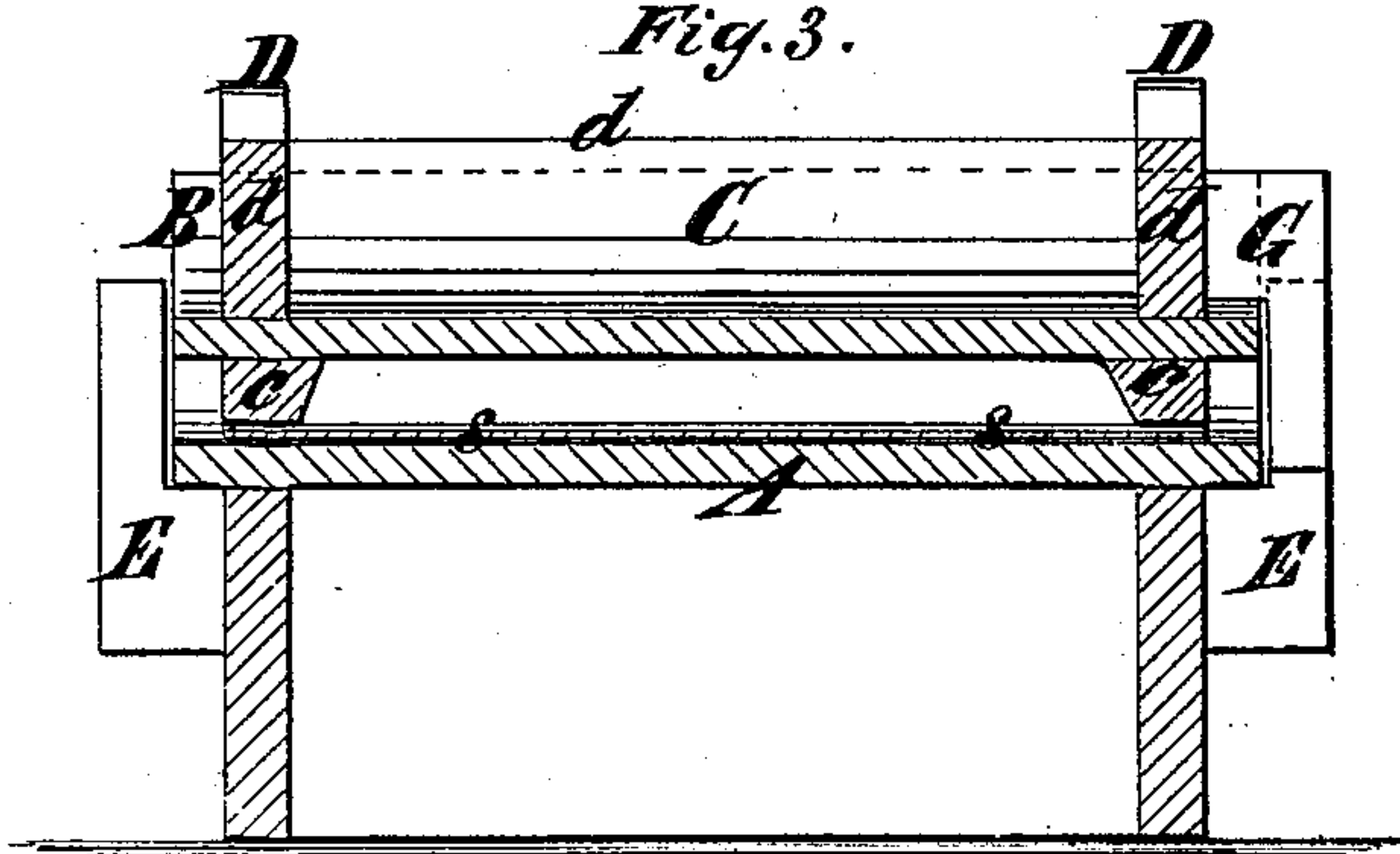


Fig. 3.



Witnesses:

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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN PANS FOR BACKING ELECTROTYPE-SHELLS.

Specification forming part of Letters Patent No. **207,645**, dated September 3, 1878; application filed November 30, 1877.

*To all whom it may concern:*

Be it known that I, MICHAEL CRANE, of the city, county, and State of New York, have invented certain new and useful Improvements in Backing-Pans for Backing Electrotypeshells; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, which forms part of this specification.

It is seldom that a perfect backing can be produced in the backing-pans now in common use having but one filling-mouth, because the metal used for backing the electrotypeshell cools too quickly in parts of the pan far from its mouth, and is therefore apt to shrink unevenly and "honeycomb," as it is termed, in which case it requires to be beaten up solid before it is fit to use for printing, and this consumes time and entails considerable expense.

The object of this invention is to obviate this defect; and to this end it consists in an improved backing-pan, curved longitudinally to suit the cylinder of the press for which the electrotypeshell is to be backed, its body being provided with means for securing the ends of the shell, and its cover being provided with strips or side pieces, which hold down the shell throughout its length, and also serve as gages to regulate the width and thickness of the backing, such backing-pan being provided with two filling-mouths, whereby the molten metal to be used as a backing can be poured into the pan at opposite ends, as will be hereinafter explained.

In the accompanying drawing, Figure 1 is a plan or top view of my improved backing-pan. Fig. 2 is a longitudinal section of the same, taken on the vertical plane passing through the dotted line *x x*, Fig. 1. Fig. 3 is a cross-section of the same, taken on the vertical plane passing through the dotted line *y y*, Fig. 1.

*A* designates the body of the backing-pan. It is adapted to be heated over a fire or otherwise, and its upper side, which receives the electrotypeshell to be backed, is curved longitudinally to correspond with the cylinder of the printing-press on which the electrotypeshell is to be used, and at the ends it is supported by standards, which are provided with grooves *a*

*a*, which preferably decrease in width toward the bottom and receive clamping-bars *B B*, which secure the ends of the electrotypeshells in place, such clamping-bars being, in this instance, provided with indentations *e e* on one or more sides, to enable them to be gripped with tongs when being removed.

*C* is the cover of the backing-pan. Its face or under side is curved to correspond with the body *A*, and at or near its side edges it is provided with two strips or side pieces, *c c*, which are shown, extending its entire length, so as to bear on the side edges of the shells to be backed, thereby holding the shell firmly down on the body of the pan; and these pieces *c c* also serve as gages to regulate the width of the backing, (see Fig. 3,) as well as its thickness. (See Fig. 2.) These strips *c c* are preferably beveled on their inner faces, to enable the cover to be removed easily from the backing-metal. The cover *C* may be stiffened on its upper side by ribs *d d*, and may be provided at the ends with overhanging nose-pieces *D D*, which bear on the clamping-bars *B B* and keep them in place, as shown in Fig. 2. Such nose-pieces also serve as chutes to guide the molten backing-metal into the pan. The ends of the pan are entirely open, and thus form two filling-mouths, *g g*, through which the backing-metal may be introduced quickly and from opposite ends of the pan, so that it will not be apt to shrink unevenly in cooling, and hence the whole back of the shell will be properly covered. The cover *C* may be prevented from moving sidewise off of the body *A* of the pan by any suitable means—say by guards and stops *E E* and *G G*.

It will be seen that this backing-pan is simple and efficient; that the two filling-mouths will afford ample provision for introducing the backing-metal, and thereby prevent it from honeycombing; that the side strips *c c* on the cover will gage the width and thickness of the backing and insure uniformity throughout; and that no subsequent beating up of the metal or planing of the curved back surface is necessary to fit the electrotypeshell for use.

Electrotypeshells backed in this improved backing-pan may, of course, be made in a flat mold, and then beaten to lie properly in this curved form. After they are backed, their

side edges are beveled in the usual way, to enable them to be clamped and secured on the press-cylinder.

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

1. A backing-pan provided with the bed A and the cover C, and having openings or mouths *g g*, one at each end of said pan, whereby the molten metal of which the backing is to be formed may be poured into the pan from opposite ends, as and for the purpose specified.

2. The combination, with the body A and the standards provided with grooves *a a*, of the clamping-bars B B, substantially as and for the purpose herein specified.

3. The combination of the nose-pieces D D with the cover C, clamping-bars B B, and body A, substantially as herein specified, whereby the said pieces D D are adapted to guide the molten metal into the pan and to hold the clamping-bars securely in place.

4. The combination, with the body A and cover C, of the side strips or gages *c c*, which are adapted to hold the electrotype-shell in place, and to confine the molten backing-metal in the proper place on the back of the shell, and also to regulate the thickness of the backing, substantially as herein described.

5. The combination of the following elements: the curved body A, the curved cover C, and the curved gages or strips *c c*, substantially as herein specified, whereby a double-mouthed backing-pan is produced for backing electrotype-shells in curved form, as herein set forth.

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Witnesses:

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EDWIN H. BROWN.