

No. 612,713.

Patented Oct. 18, 1898.

W. P. DOULIN & F. W. RAYMOND.

ANNEALING POT.

(Application filed Jan. 29, 1898.)

(Model.)

2 Sheets—Sheet 1.

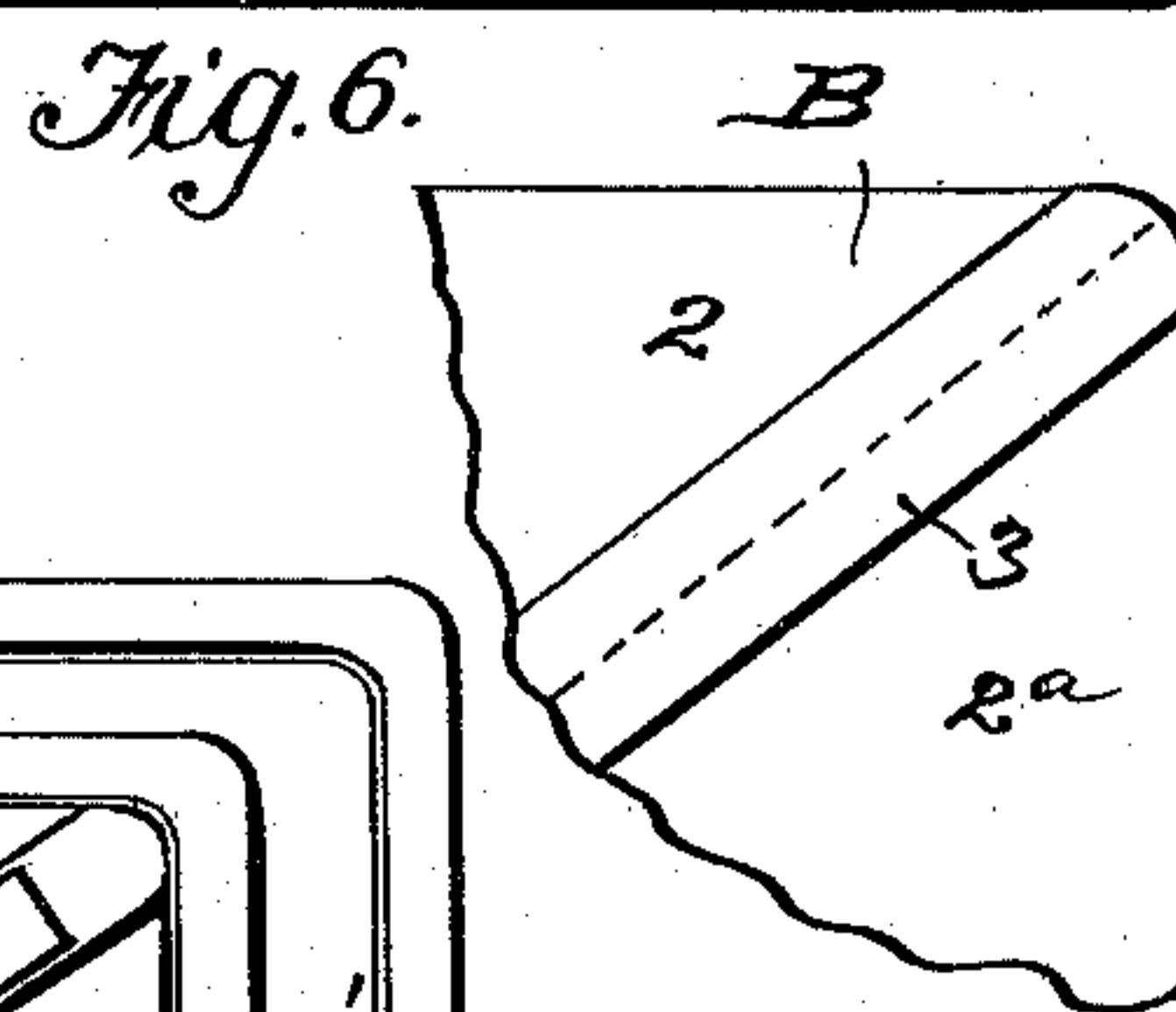
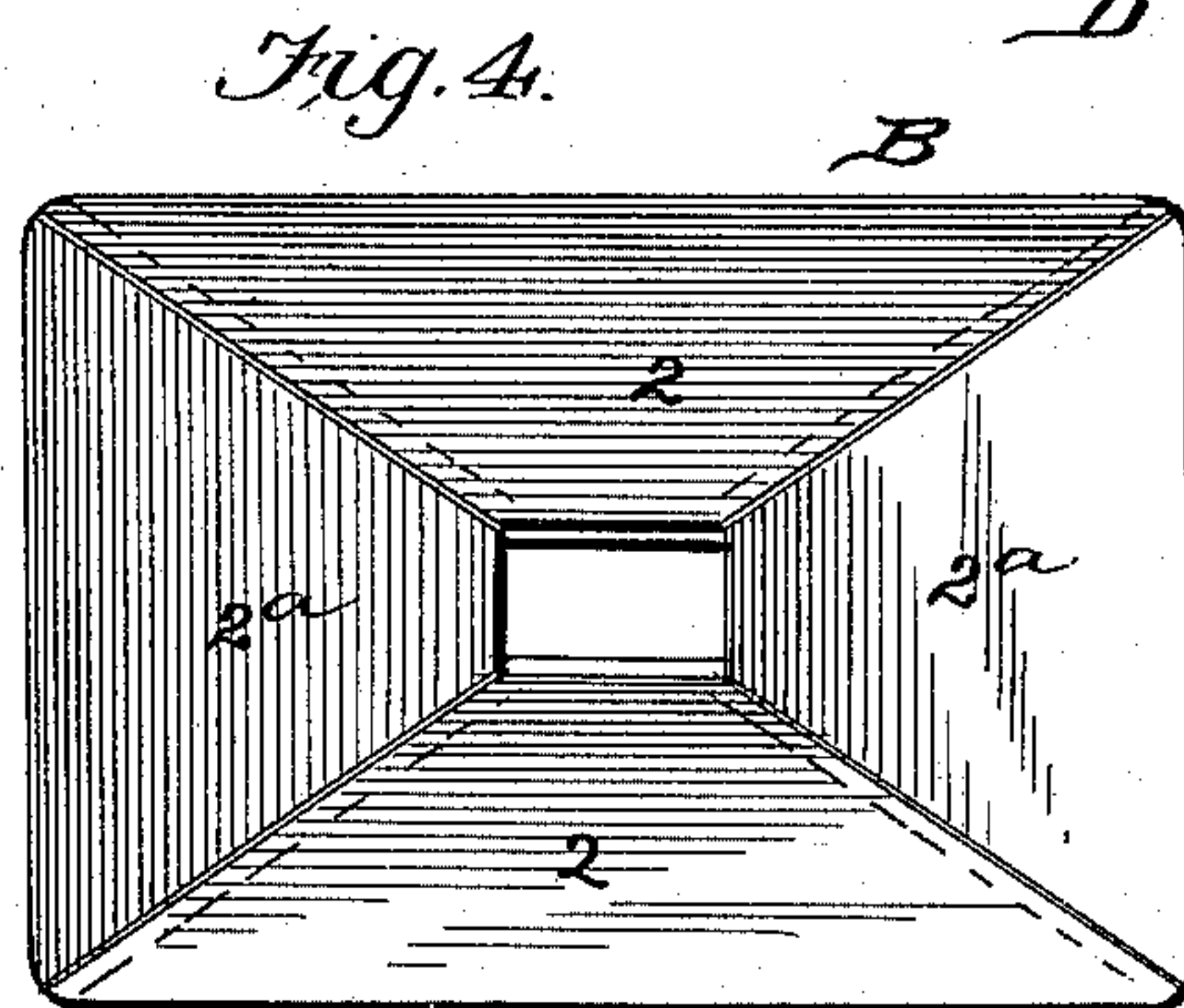
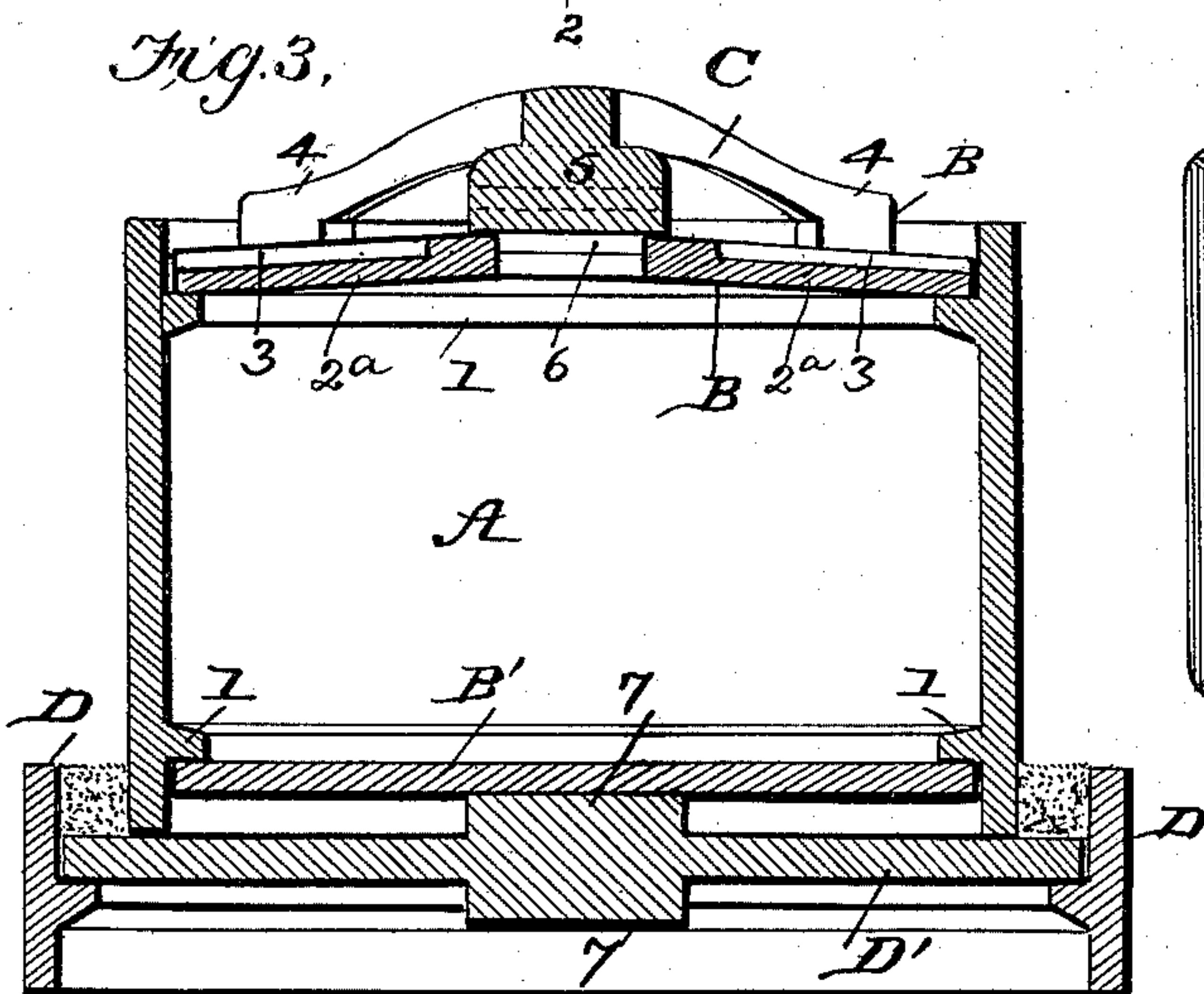
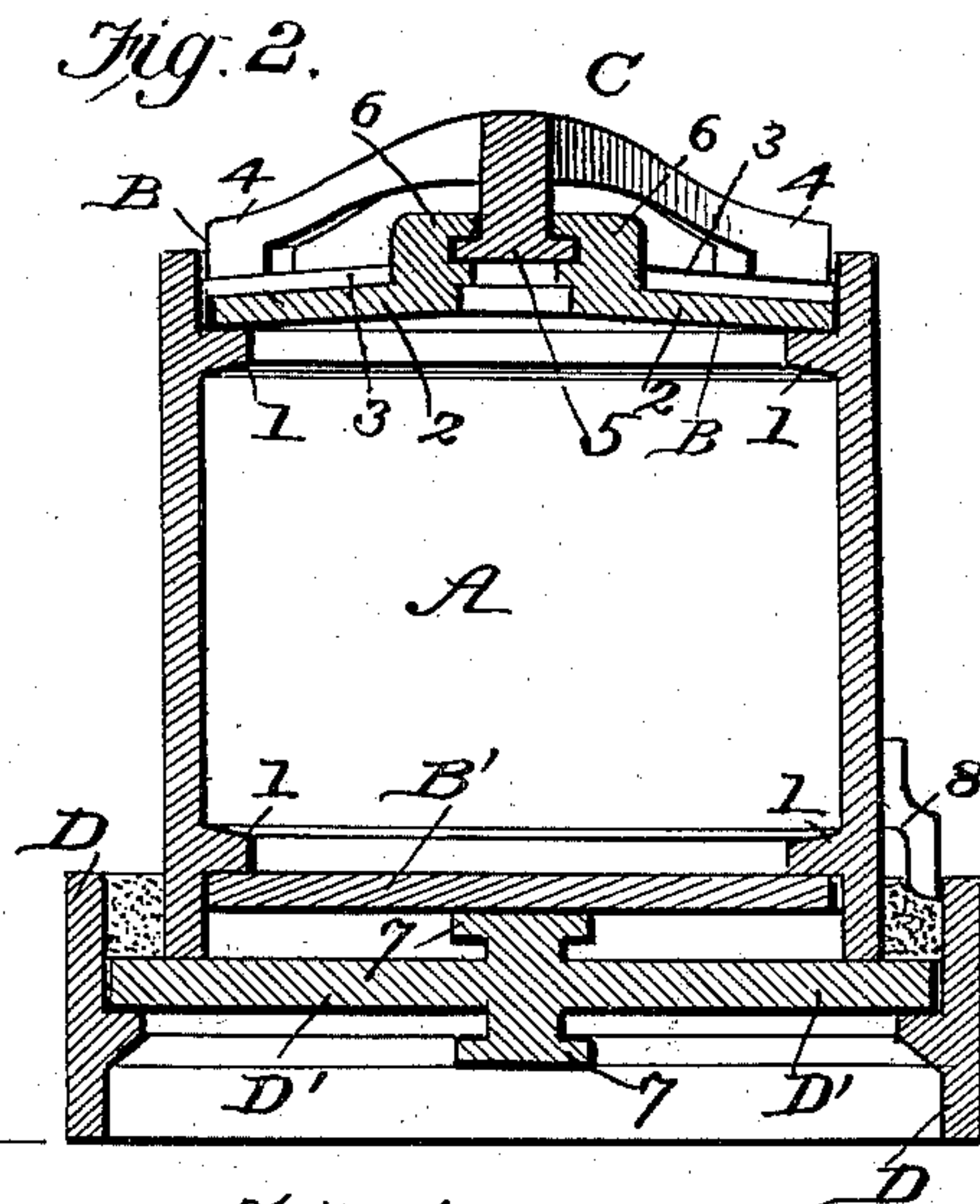
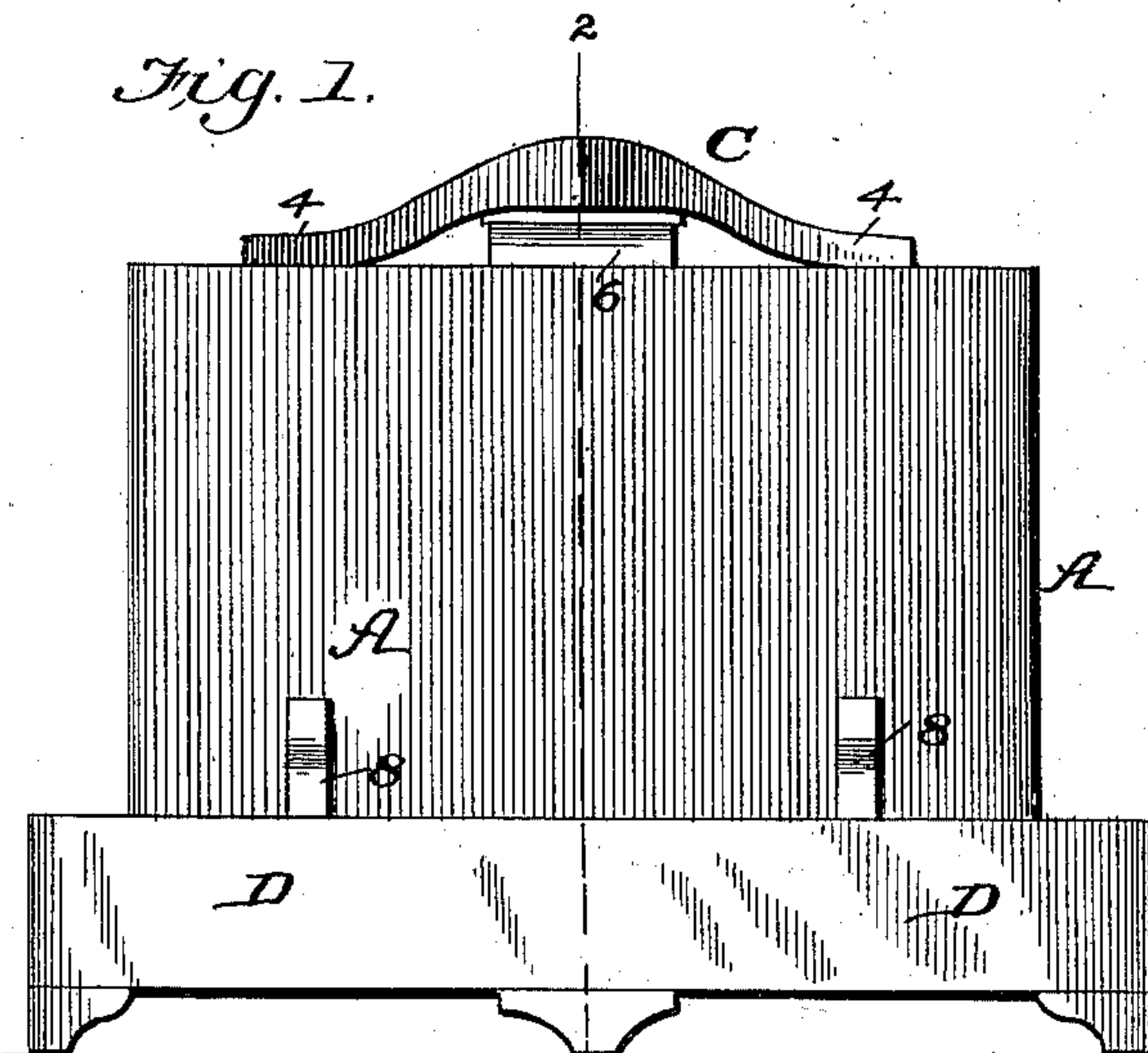
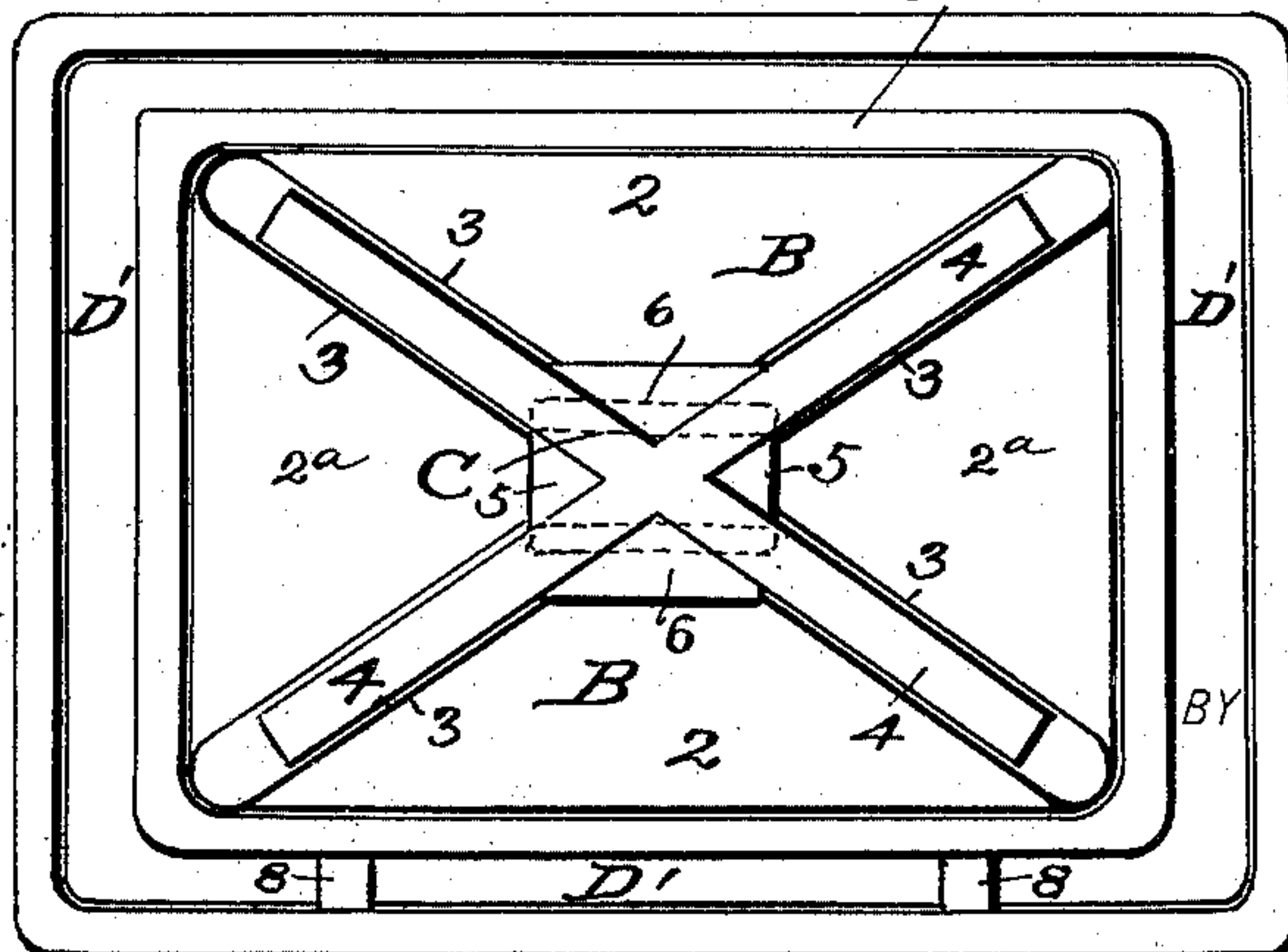


Fig. 5.



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Fig. 7.

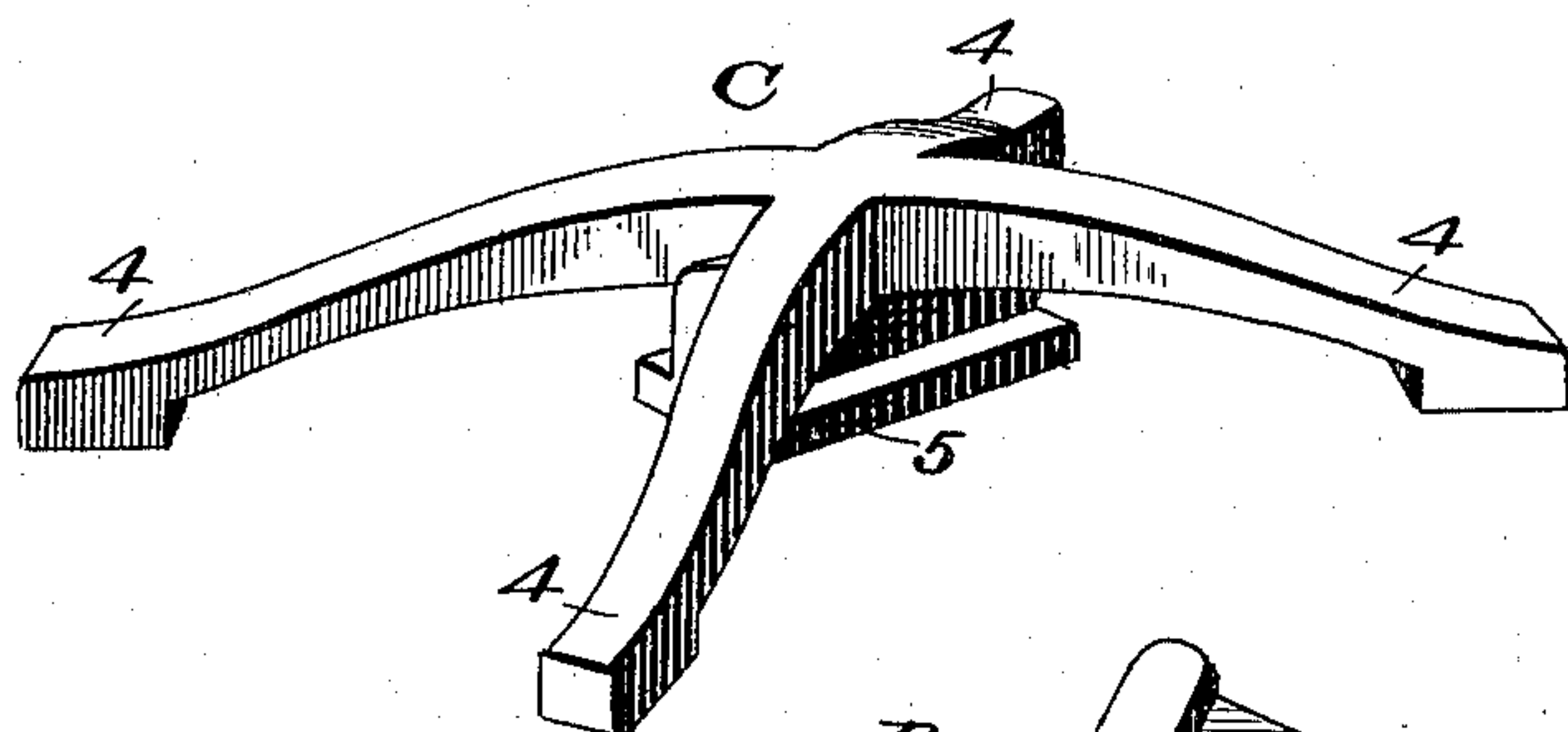
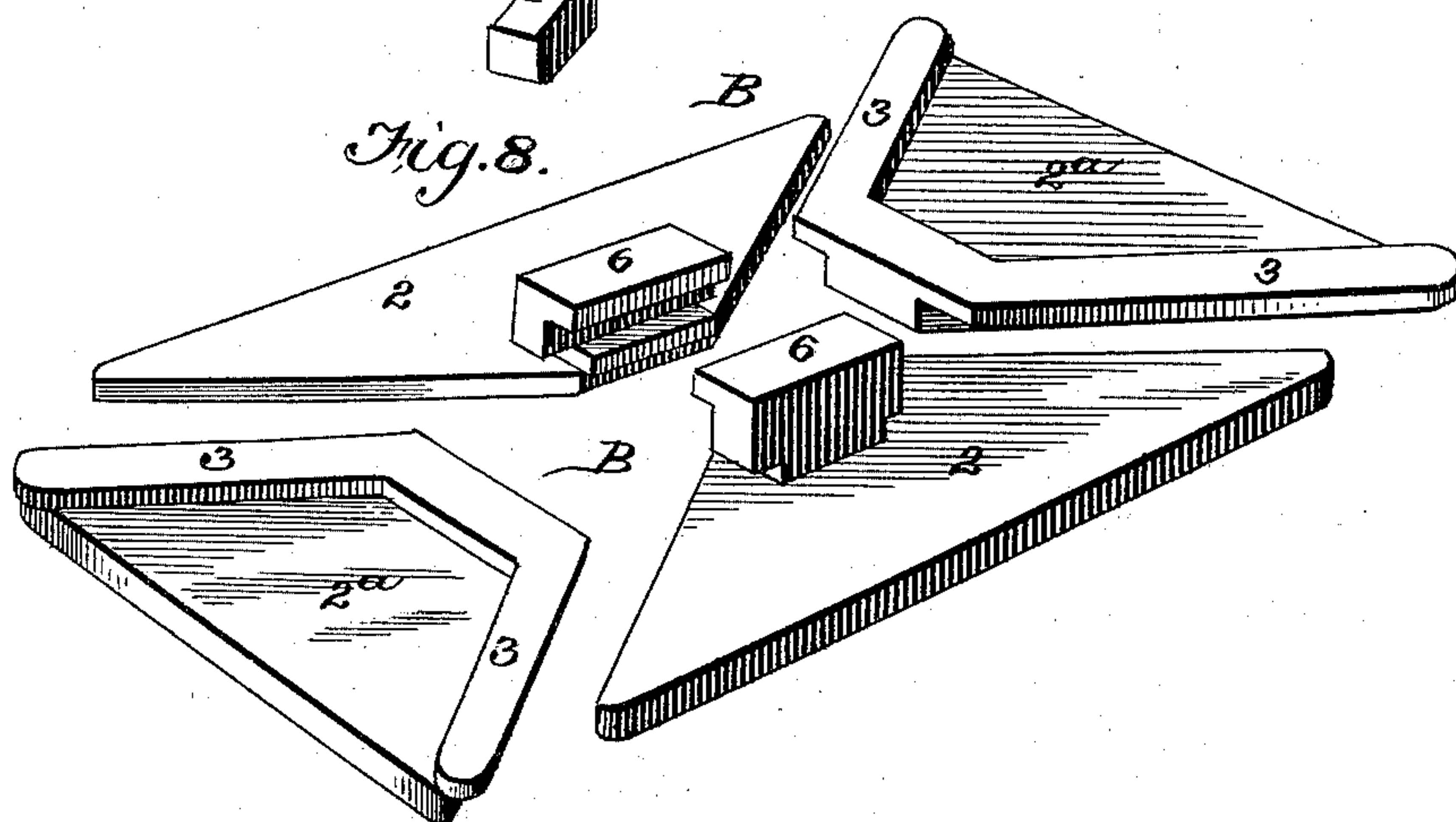


Fig. 8.



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UNITED STATES PATENT OFFICE.

WILLIAM P. DOULIN AND FRANCIS W. RAYMOND, OF WHEELING, WEST VIRGINIA.

ANNEALING-POT.

SPECIFICATION forming part of Letters Patent No. 612,713, dated October 18, 1898.

Application filed January 29, 1898. Serial No. 668,447. (Model.)

To all whom it may concern:

Be it known that we, WILLIAM P. DOULIN and FRANCIS W. RAYMOND, of Wheeling, in the county of Ohio and State of West Virginia, have invented a new and useful Improvement in Annealing-Pots, of which the following is a specification.

Our invention is an improvement in the class of pots for annealing tin plates. The box or pot proper commonly used for this purpose has a closed integral or solid top; but it is open at the bottom, which rests upon a suitable flat base having a raised peripheral flange. In preparing for the annealing process the tin plates are piled on such base and the aforesaid box or pot proper placed over them. Then the space between the lower edge of the box and the flange of the base is packed with sand to prevent access of flame to the tin plates while in the annealing-furnace and of cold or cool air in the subsequent stage while the plates are cooling. The pots are liable to deteriorate by the expansion and contraction due to successive heating and cooling, the same being often warped or twisted and cracked or broken at the corners, while their integral tops sink or become depressed more or less. The base on which the pot proper rests is also liable to become warped or twisted like the latter. Our invention is designed to overcome or avoid these objections and defects, and it is embodied in the construction and combination of parts hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a side view of our improved annealing-pot. Fig. 2 is a vertical section on line 2 2 of Fig. 1. Fig. 3 is a central longitudinal section. Fig. 4 is a bottom plan view of the removable cover. Fig. 5 is a plan view of the pot. Fig. 6 is an enlarged plan view of a portion of the removable cover. Fig. 7 is a perspective view of the brace constituting a portion of the cover. Fig. 8 is a perspective view of the detachable flat sections of the cover.

The rectangular body A of our improved box or pot proper is open at the top as well as the bottom instead of being closed at the top, as usual heretofore. At a point removed from the upper and lower edges, in practice about two inches from said edges,

we provide the body A with two interior flanges or ledges 1, Figs. 2 and 3, and on whichever flange is uppermost we support a removable top or cover B, which fits loosely into the body A. The said cover B is constructed of four flat sections 2 and 2^a, Fig. 8, and an arched cruciform brace C. The inner edges of the side sections 2 are adapted to fit under flanges 3, formed on the corresponding edges of the other or end sections 2^a, as shown in Fig. 6. The side sections 2 are provided with flanged or grooved blocks 6, which are arranged on the upper side of said sections and located at their inner angles. The brace C has a central pendent dovetail portion 5, Fig. 7, which is in the nature of a block provided with side flanges adapted to fit in the longitudinal grooves of the blocks 6 of sections 2.

When the pairs of sections 2 and 2^a are adjusted together, as shown in Figs. 4, 5, and 6, the brace C may be applied thereto by sliding the flanged block 5 into the space between the opposite grooved blocks of sections 2, as shown in Fig. 2, and when the brace is properly adjusted the enlarged ends of its arms 4 bear upon the flanges 3 of the end sections 2^a, as shown in Figs. 2, 3, and 5, and thus the several detachable parts composing the cover are all held firmly together.

We also employ a removable bottom plate B', Figs. 2 and 3, for the pot proper, A, which bottom plate B' is constructed solid or in one piece instead of several. It rests on the raised center piece 7 of the removable bottom plate D' of the flanged base-frame D. We propose to reverse this bottom plate B' as occasion may require in order to prevent or remove a serious depression, warp, or twist in the same.

In practice the top B is placed in the pot-body A after the latter has been placed over the pile of tin plates resting on the false bottom plate B', which in turn rests on the removable bottom plate D' of the base-frame D.

When the pot is charged into the furnace, it is covered by or immersed in sand to the depth of about five inches, and hence the flame strikes only the top and upper portion of the same. When one edge of the body A is burned so as to be no longer usable, the body is reversed or turned upside down, the bottom edge

thereby becoming the top, so that it may be in turn subjected to the action of flame. The durability of the pot is hence greatly increased as compared with those of the old style.

5 The loose or removable top B is covered with sand around its edges, which prevents access of flame and air to the interior of the pot, but at the same time it provides for escape, through the sand on the lid B', of the steam
10 generated from the moisture adhering to the tin plates as they come wet from the pickling-bath, which is an important advantage.

The false bottom plate B' is also reversible, like the pot-body A, and hence when it be-
15 comes bent or curved by effect of heat and weight of the superimposed pack of tin plates it is turned over, so that the upper becomes the under side. The bottom plate D' of the base D is also reversible in the same way as the pot
20 bottom plate B' and for the same reason.

By thus constructing the pot in detachable independent sections or parts expansion and contraction are provided for or neutralized in such manner that injurious or destruc-
25 tive twisting and cracking are practically prevented.

The body A of the pot is provided with hooks 8 on the side and near the edge, as shown in Figs. 1 and 2, which serve as handles in lifting
30 the part A off of the base D.

What we claim is—

1. The combination, with the enlarged base-frame D, having an interior ledge, the false bottom plate D' supported thereon, and hav-
35 ing a raised center portion, the body of the pot, adapted to be set on such false bottom, and itself having a bottom plate B', which fits within it, and is supported upon the aforesaid raised center portion of the false bottom plate,
40 as shown and described.

2. The combination with the body of the annealing-pot, having the interior flange lo-
cated near its edge, of the removable top com-
posed of sections suitably connected, and an
45 arched top brace having a dovetail slide detachably connected with two of said sections, as shown and described.

3. The combination with the body of the annealing-pot, having the interior flange lo-
cated near its edge, of the removable top com-
posed of sections suitably connected, and an
50 arched top brace having a dovetail slide which detachably engages grooved blocks secured oppositely on opposite sections, as shown and described.

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Witnesses:

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