

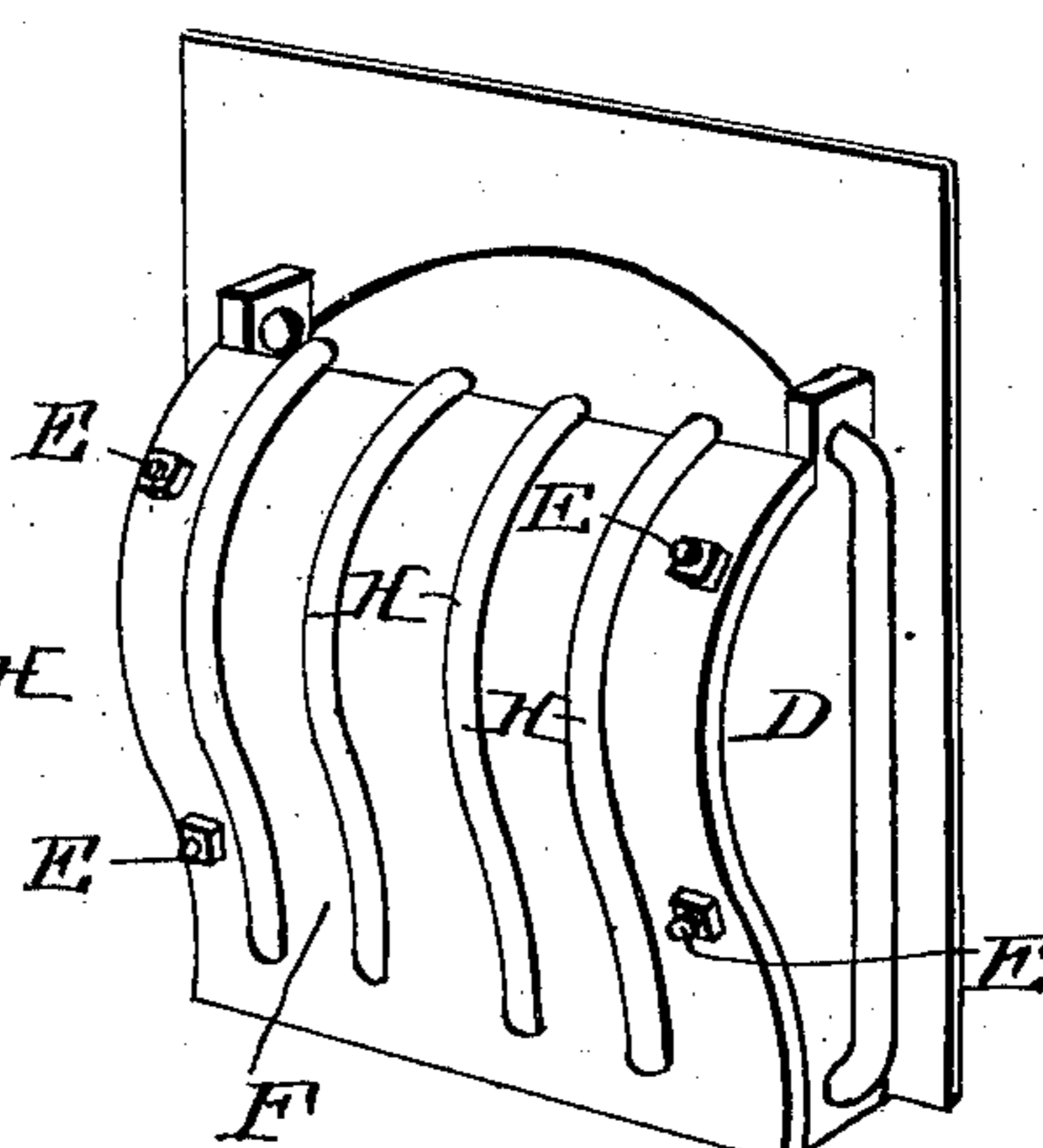
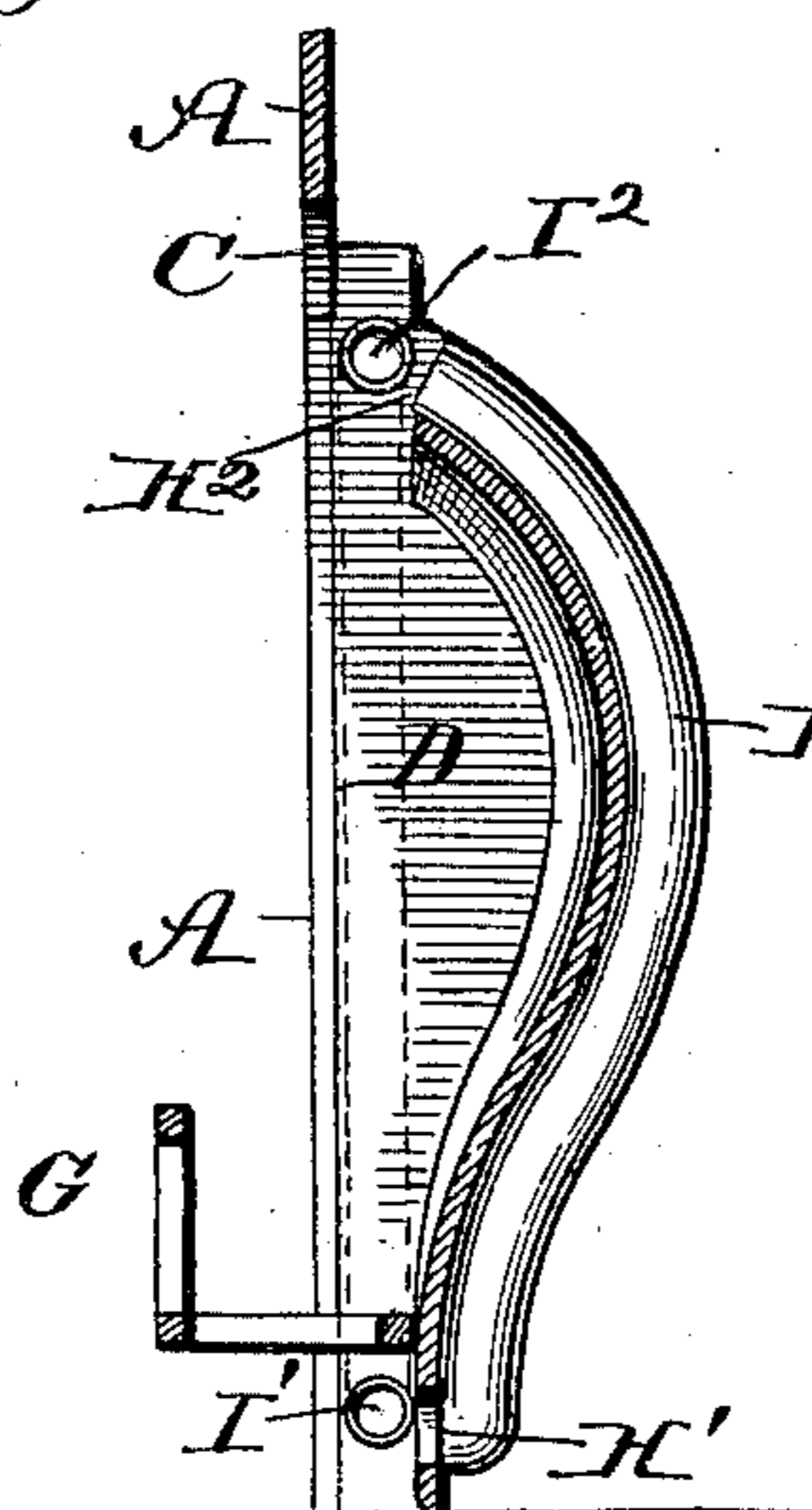
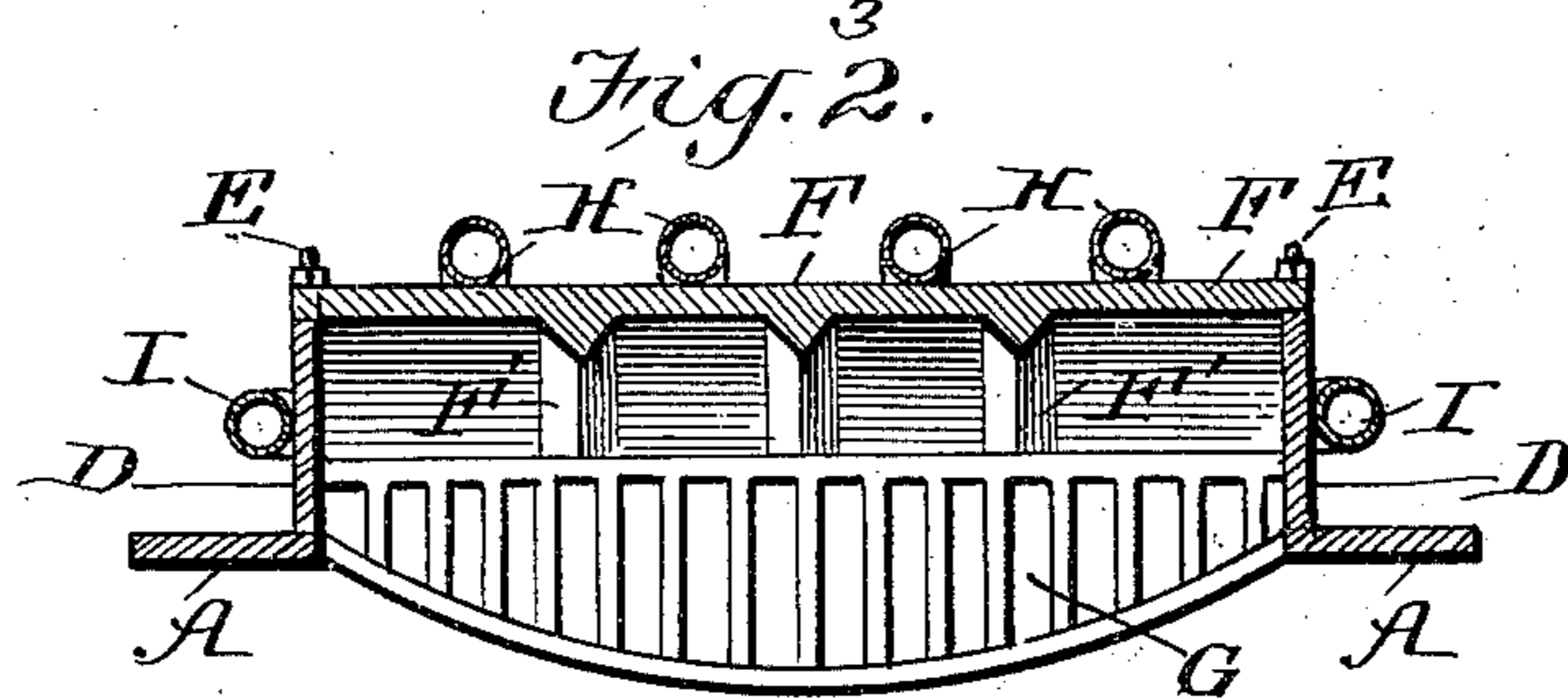
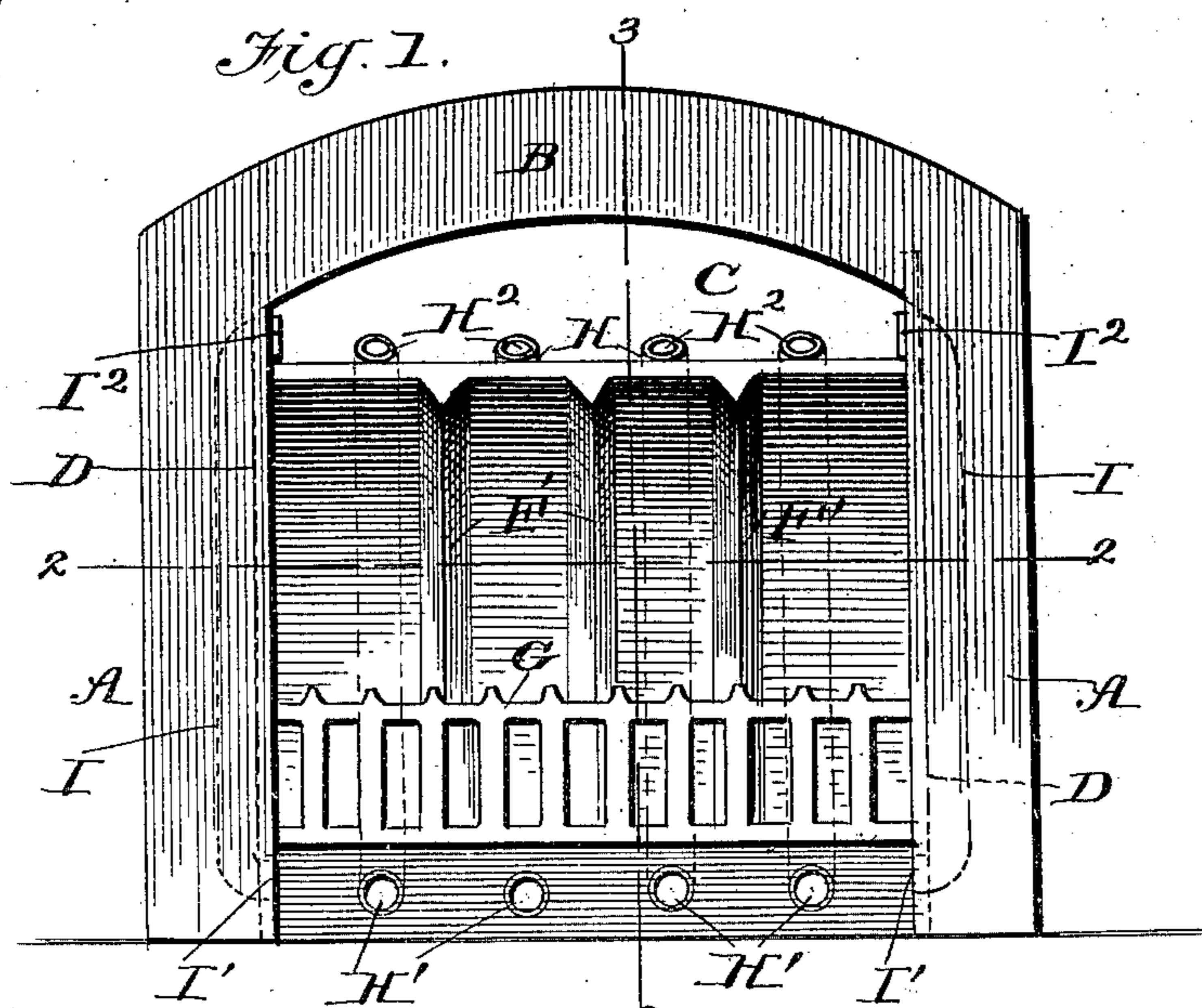
No. 688,148.

Patented Dec. 3, 1901.

**L. B. ARNOLD.**  
**FIREPLACE.**

(Application filed May 13, 1901.)

(No Model.)



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

LOGAN BURTON ARNOLD, OF HANLY, KENTUCKY.

## FIREPLACE.

SPECIFICATION forming part of Letters Patent No. 688,148, dated December 3, 1901.

Application filed May 13, 1901. Serial No. 59,990. (No model.)

*To all whom it may concern:*

Be it known that I, LOGAN BURTON ARNOLD, residing at Hanly, in the county of Jessamine and State of Kentucky, have invented a new and useful Improvement in Fireplaces, of which the following is a specification.

My invention is an improvement in fireplaces; and the invention consists in certain novel constructions and combinations of parts, as will be hereinafter described and claimed.

In the drawings, Figure 1 is a front view of a fireplace embodying my invention. Fig. 2 is a cross-sectional view on about line 2 2 of Fig. 1. Fig. 3 is a vertical longitudinal section on about line 3 3 of Fig. 1, all of which will be described; and Fig. 4 is a rear perspective view of the fireplace.

The fireplace has the front composed of the uprights A and the arch crown-piece B and provides the fireplace-opening C, as shown in Fig. 1. The side plates D are arranged in rear of the front and preferably abut at their front edges against the rear face of the uprights A at the inner edges of the latter, as best shown in Fig. 2. At their rear edges the side plates D are secured, preferably by bolting, as shown at E, to the back F. This back F closes the rear of the fireplace and is preferably curved vertically, as shown in Fig. 3, and terminates at its upper edge, preferably, below the upper end of the opening C in the fireplace-front, as will be understood from Figs. 1 and 3. Manifestly this back when made of metal such as cast-iron has a tendency to warp under the influence of the heat, and it becomes quite an object to provide means by which to prevent such warping and also to provide means by which the intensity of the fire may be increased and the heating of the room be improved. I also provide means for preventing the warping of the side plates D and for securing a circulation of air in connection therewith. The grate G is arranged as shown in Figs. 1 and 3, being suitably fitted to the fireplace.

On the back F are provided the upright ribs F' on its front face and the tubes H on its rear face, such ribs and tubes conforming to the curvature of the back and the tubes being arranged on lines between the ribs, as will be understood from Figs. 1 and 2. The back is provided below the bottom of the grate G with openings H', communicating with the lower ends of the tubes H, and the upper ends of the said tubes H are arranged

to discharge at the upper edge of the back F and below the line of the upper end of the opening C. It will be noticed that the tubes H, which may be secured to the back F in any suitable manner, serve not only for the circulation of air as desired, but also operate to brace and strengthen the back plate and co-act in securing this latter result with the ribs F' on the front of the back, such ribs and tubes being staggered, as best shown in Figs. 1 and 2.

The side plates D are provided on their sides opposite the fire with tubes I, which may be secured to the said plates in any suitable manner, open at their lower ends I' through the said plates below the bottom of the grate and open at their upper ends through the said plates at I<sup>2</sup> about in line with the open upper ends H<sup>2</sup> of the tubes H, as will be understood from Figs. 1 and 3.

By preference the bolts E are cast in the side plates D and project through suitable holes in the back plate F.

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

1. The improvement in fireplaces herein described, consisting of the front having the fireplace-opening, and the uprights, the side plates arranged in rear of said uprights, and provided on their sides opposite the fire with tubes which open at their lower ends through the side plates at a point below the grate and at their upper ends through said side plates adjacent to the top of the fireplace-opening, the grate, and the back curved vertically, fitted to the side plates, and provided on its front face with the upright ribs, and on its rear face with the tubes staggered with respect to the said ribs and opening at their lower ends through the back plate below the grate and at their upper ends adjacent to the upper end of the fireplace-opening, all substantially as and for the purposes set forth.

2. A fireplace having a back plate provided on its front face with the upright ribs and on its rear face with upright tubes staggered with respect to the front ribs, said tubes being open at their upper and lower ends substantially as and for the purposes set forth.

LOGAN BURTON ARNOLD.

Witnesses:

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