

M. F. WILFONG.

ANNEALING BOX.

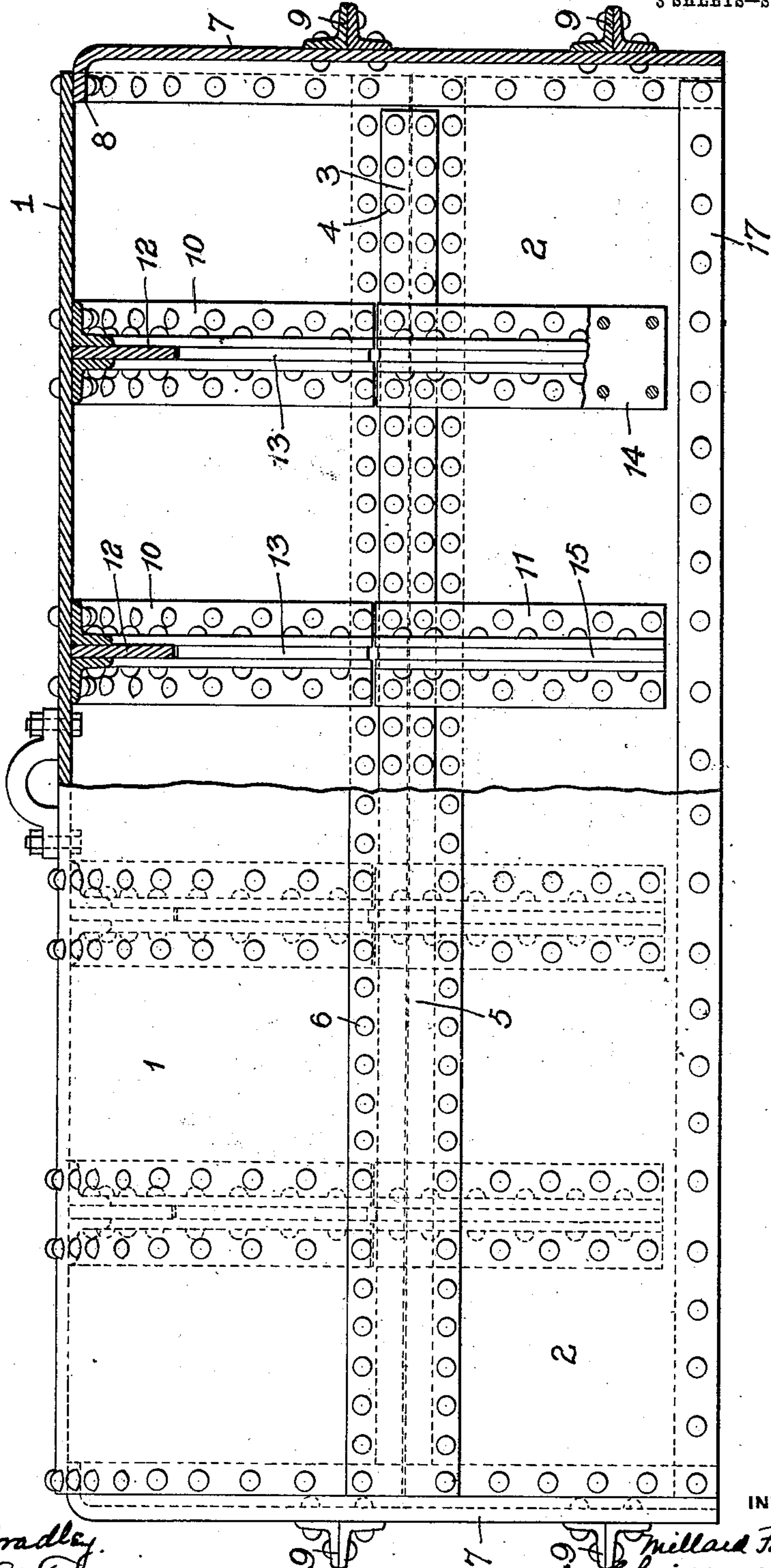
APPLICATION FILED JULY 7, 1908.

915,258.

Patented Mar. 16, 1909.

3 SHEETS—SHEET 1.

FIG. 1



WITNESSES:

*J. Herbert Bradley*  
*Francis J. Tomason*

INVENTOR

*Millard F. Wilfong*  
*by Christy and Christy*  
Atty's

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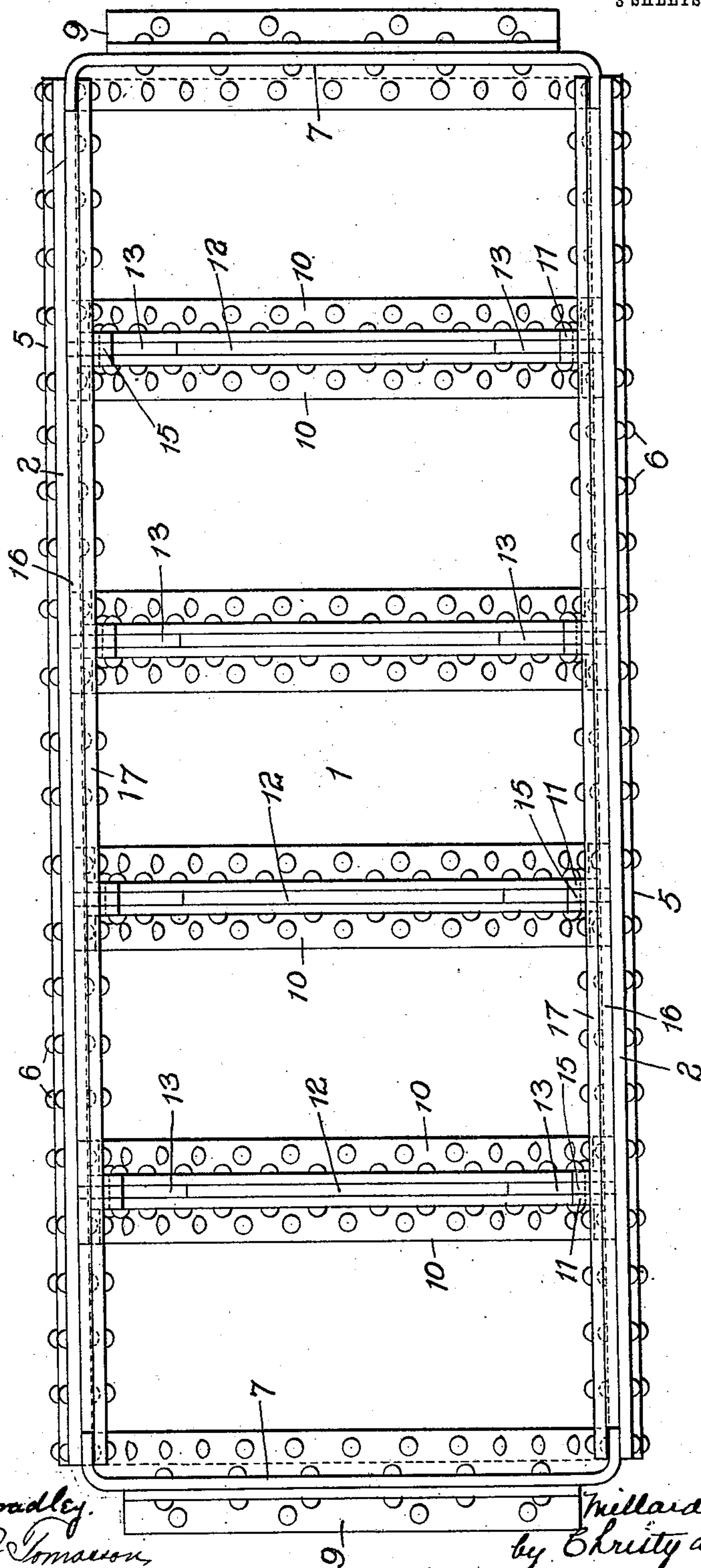
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3 SHEETS—SHEET 2.

FIG. 2.



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Atty's

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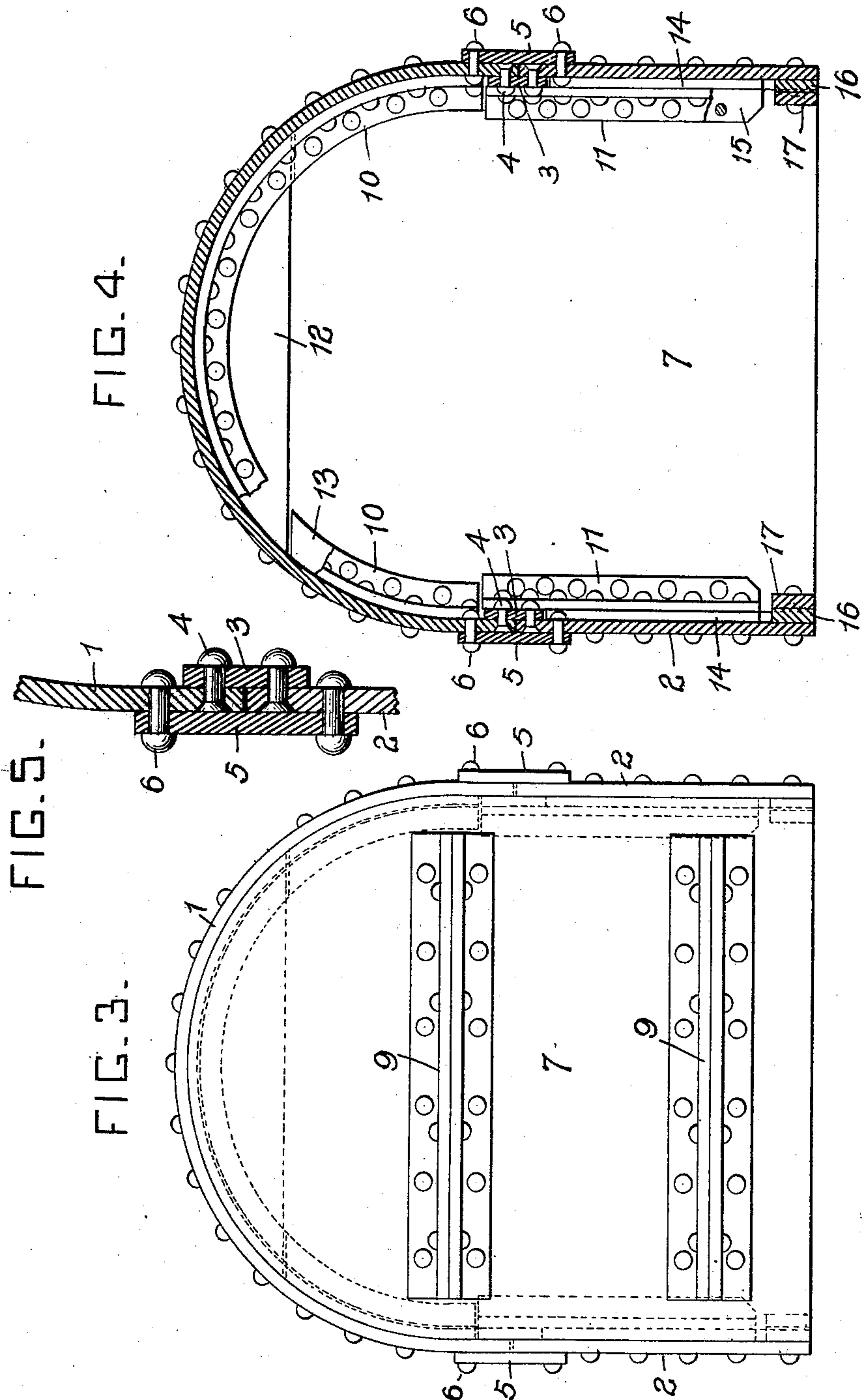
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3 SHEETS—SHEET 3.



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# UNITED STATES PATENT OFFICE.

MILLARD F. WILFONG, OF PHILADELPHIA, PENNSYLVANIA.

## ANNEALING-BOX.

No. 915,258.

Specification of Letters Patent.

Patented March 16, 1909.

Application filed July 7, 1908. Serial No. 442,364.

*To all whom it may concern:*

Be it known that I, MILLARD F. WILFONG, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, a citizen of the United States, have invented or discovered a certain new and useful Improvement in Annealing-Boxes, of which improvement the following is a specification.

The invention described herein relates to certain improvements in the class or kind of annealing boxes described and shown in Letters Patent No. 467,474, granted to me January 19, 1892, and has for its object certain constructions and combinations herein-  
after more fully described and claimed.

In the accompanying drawings forming a part of this specification, Figure 1 is a view partly in side elevation and partly in section of my improved annealing box; Fig. 2 is an inverted plan view of the box; Fig. 3 is an end elevation of the same; Fig. 4 is a transverse section and Fig. 5 is a sectional detail view on an enlarged scale.

In the practice of my invention, the top of the box is preferably made of a single sheet of metal bent to form an arch, the axis of which is longitudinal of the box as shown in Figs. 3 and 4. The side walls are also preferably formed of single sheets of metal and united to the top portion by a butt joint, the two sheets being connected by a strip 3 of metal extending along inside of the box and secured to the side and top partitions by rivets 4.

By reference to Fig. 5 it will be seen that the outer heads of the rivets 4 are counter-sunk in the side and top walls so as to be flush with their surfaces and a strip 5 is placed along the outside walls of the box so as to cover these counter-sunk heads, said strips being held in position by rivets 6 passing therethrough, and the walls of the box above and below the strip 3. Heretofore this connecting strip 3 has been generally arranged outside of the box, or if placed inside the outer ends of the rivets have been exposed to the heat so that they are rapidly cut away. In my improved construction the main connecting strip 3 is arranged inside of the box and the outer ends of the rivets 4 are protected by the strips 5 so that even if the strips 5, which also assist in connecting the top and side portions of the box, are burned away, the box will still be useful and the joint between the top and side walls will be intact.

The end walls 7 of the box are preferably made of a single sheet of metal provided with an inwardly turned flange 8 which extends inside of the ends of the top and side walls and are firmly riveted thereto. It is preferred that the end walls should be strengthened by structural shapes such as tees or angle irons 9 arranged as shown in Fig. 1. The top and side walls are strengthened by strips 10 and 11 preferably made in the form of angle irons and arranged inside of the box to the walls of which they are securely riveted. In case such strengthening strips are made in two parts or sections as two angle irons oppositely arranged, the inwardly projecting portions of such shape are riveted together. It is preferred in order to add to the strength and rigidity of the arched top to arrange between the strengthening pieces 10 a filling piece 12 which will extend across in the form of a chord to the upper portion of the box as clearly shown in Figs. 1, 2 and 4. This chord piece serves to strengthen the arched portion of the box both vertically and transversely. When such filling piece is used, filling pieces 13 are also arranged between the strengthening pieces 10 below the chord and extend along the side of the box down to the connecting strip 3. It is preferred that the vertical strengthening pieces 11 arranged transversely of the side walls should extend across the longitudinal connecting piece 3, and hence in order to avoid bending the vertical strips 11 the filling pieces 14 are arranged between the side walls and the vertical pieces 11, having a thickness equal to that of the strips 3, as clearly shown in Fig. 4. The lower edges of the side walls are strengthened by strips 16 and 17, the strips 16 being of a thickness equal to that of the flanges of the head 7 and the strips 17 extending so as to overlap such flanges at the end of the box as clearly shown in Figs. 1 and 2.

As is well known, portions projecting outwardly from the general surfaces of annealing boxes are cut and destroyed by the flames more quickly than the plain or uninterrupted surfaces. In my improved box the protecting strips 5 and the strengthening strips across the end walls, are the only portions projecting outside the general surface of the box. The chord piece 12 adds very materially to the rigidity of the box when highly heated.

As will be readily understood by those skilled in the art the construction shown and



described for protecting the joints between adjacent sheets forming parts of an annealing box can be employed in boxes formed of independent sheets regardless of the shape or  
5 contour or arrangement of such sheets.

I claim herein as my invention:

1. In an open-bottomed U-shaped annealing box, the combination of vertical side walls, a separate arch shaped top therefor,  
10 having its edges abutting the edges of the side walls, a strip riveted to the top and side walls and connecting the same the heads of the rivets being countersunk and a protecting strip secured over and protecting such  
15 heads.

2. An annealing box consisting of metal sheets suitably shaped to form an open bottom box, strips of metal riveted to adjacent sheets and covering the joint between the same, the heads in the rivets being counter- 20 sunk in the sheets and strips of metal arranged over the counter-sunk heads and secured to the sheets.

In testimony whereof, I have hereunto set my hand.

MILLARD F. WILFONG.

Witnesses:

WILLIAM E. GAUNT,  
J. CARROLL WATSON.