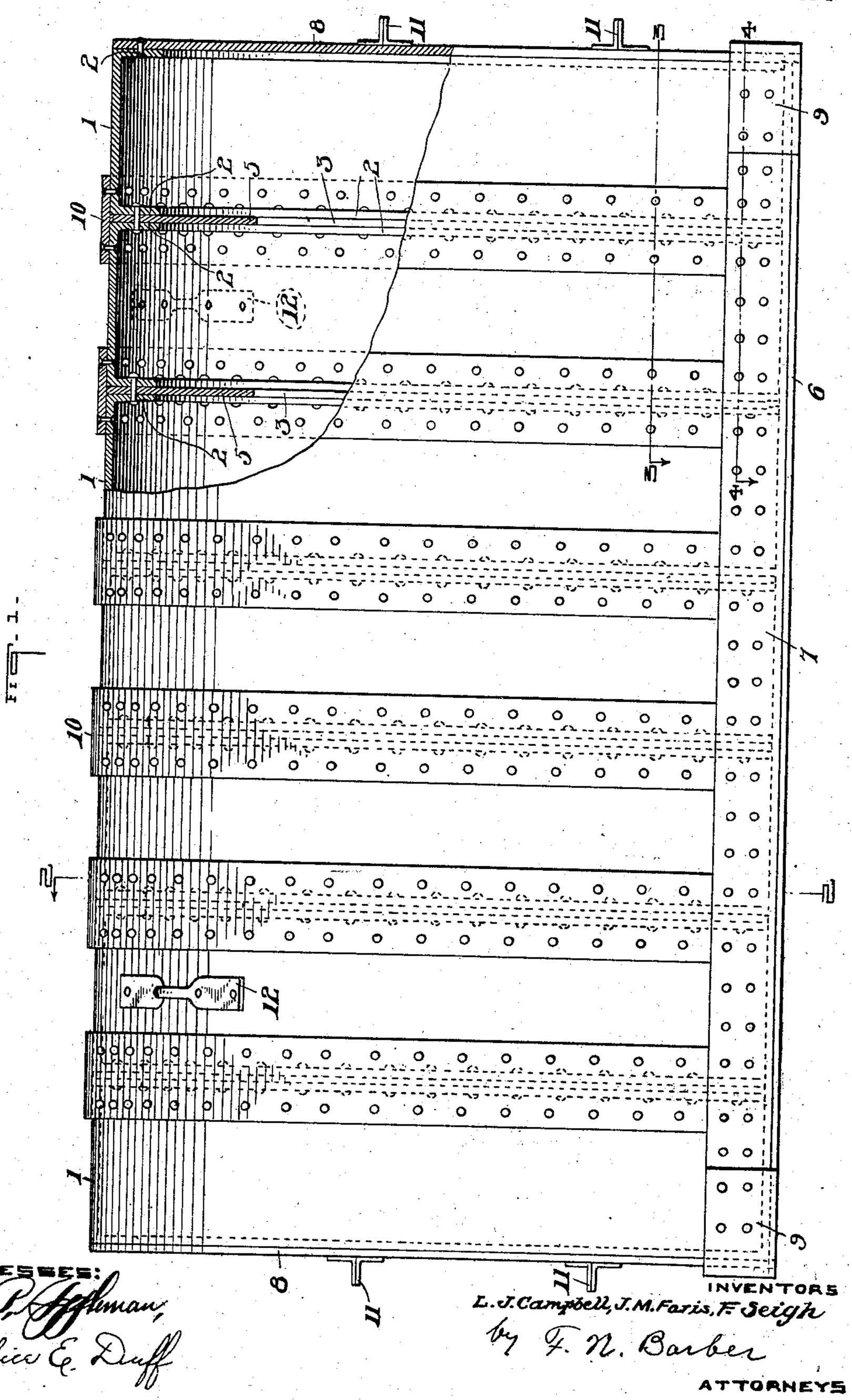
No. 889,438. PATENTED JUNE 2, 1908.

L. J. CAMPBELL, J. M. FARIS & F. SEIGH.

ANNEALING BOX.

APPLICATION FILED AUG. 14, 1907.

2 SHEETS—SHEET 1.



WITNESSES:

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FIG. 3.

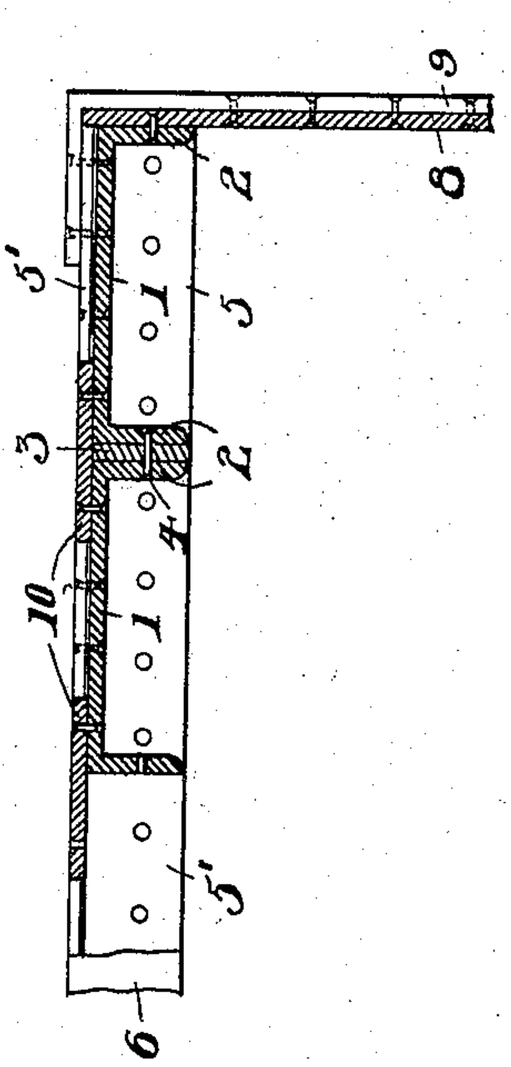

FIG. 4.

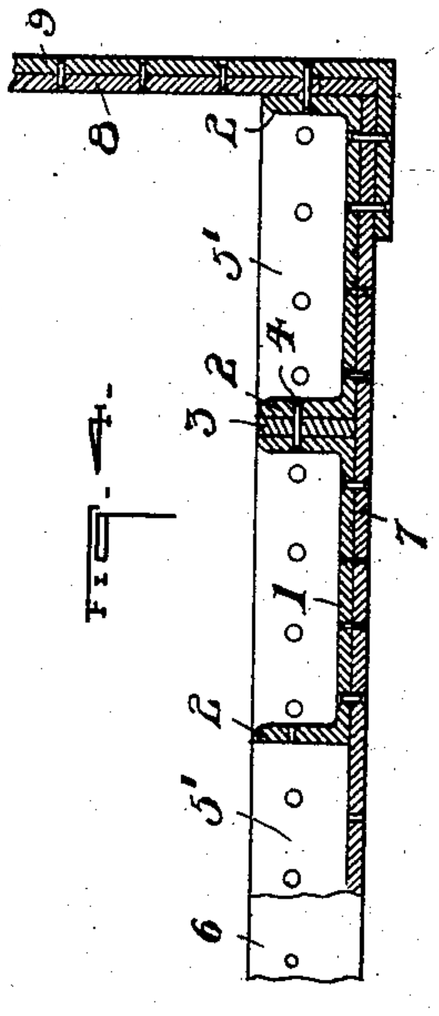

FIG. 2.

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UNITED STATES PATENT OFFICE.

LOUIS J. CAMPBELL, JACOB M. FARIS, AND FRANK SEIGH, OF YOUNGSTOWN, OHIO.

ANNEALING-BOX.

No. 889,438. Specification of Letters Patent. Patented June 2, 1908.

Application filed August 14, 1907. Serial No. 388,469.

To all whom it may concern:

Be it known that we, LOUIS J. CAMPBELL, JACOB M. FARIS, and FRANK SEIGH, citizens of the United States, residing at Youngstown, in the county of Mahoning and State of Ohio, have invented or discovered new and useful Improvements in Annealing-Boxes, of which the following is a specification.

Our invention relates to annealing boxes and has for its object the construction of such boxes out of a series of channel-bars suitably secured together.

Another object is to provide braces to prevent the roof of the boxes from sagging under the action of the high temperature, to which they are subjected.

A still further object is to rigidly bind the parts together by straps and bars, as will be presently explained.

Other objects will appear hereinafter.

Referring to the drawings, Figure 1 is a side elevation of the preferred form of our invention, with a portion being broken away. Figs. 2, 3 and 4 are sections on the lines 2—2, 3—3, and 4—4, respectively, on Fig. 1.

The sides are composed of a series of steel channel-bars 1, bent U-shape with their flanges 2 within the bent shape. These U-shaped channel-bars are arranged side by side with their outer faces even and with the flanges 2 of adjacent channel-bars overlying each other, but separated from each other by the narrow filler-strips 3 and the arch-plates 5. The adjacent flanges and the filler strips 3 are securely held together by rivets, as shown. The strips 3 do not pass over the top or crown of the box, but end at the dotted lines 4 on Fig. 2. On the upper ends of the opposite filler-strips is the arch plate 5, which is of the same thickness as the filler-strips. The arch-plate has its upper edge conformable to the curvature or shape of the roof and preferably extends straight across from one side of the box to the other, as shown on Fig. 2. It is secured between the flanges 2 by rivets in the same manner as the strips 3 and the said flanges are secured together.

Channel-bars with the intervening filler-strips and arch-plates are secured together one after another until the desired length of the box has been attained. On Fig. 1, we have shown seven channel-bars arranged as described.

The lower ends of the channel-bars 1 are riveted to the inner faces of the vertical members of L-bars 5′, the flanges 2 being seated on the upper faces of the horizontal members of said bars 5′. To the bottoms of the bars 5′ we rivet the bottom plates 6. The plates or straps 7 are riveted edgewise on the outer faces of the sides of the box and preferably overlie the outer edges of the plates 5′.

The ends of the box are closed by the plates 8, which are riveted to the flanges 2 of the end channel-bars 1. The straps 9 are riveted edgewise to the ends 8 and have their lower edges, like the lower edges of the straps 7, flush with the bottom of the box. The ends of the straps are bent over on the adjacent ends of the straps 7 and are riveted with the straps 7 to the channel-bars.

Overlying each joint between adjacent channel-bars and extending from the top edge of one bar 5′ to the top edge of the other bar 5′ is a strap or plate 10, riveted on each side of the joint to the channel-bars 1, as shown on Figs. 1, 2 and 3.

To the ends 8 of the box, we secure the flanges 11, each flange being composed of two L-bars with their outer horizontal members contiguous and their vertical members extending in opposite directions and riveted to the said ends 8. These flanges 11 strengthen the box and afford means for attaching lifting hooks, if desired. We rivet to the box suitable eyes or loops 12, by which the box may be handled. Each eye consists of flat end portions riveted to the box and of a raised or looped portion 13 standing out from the body of the box, so that suitable hooks or the like may enter for lifting and carrying the same.

The box described is very strong. Its roof cannot sag, owing to the flanges 2 and particularly to the arch plates 5. The bottom is exceedingly rigid by reason of the angle bars 5′ and the horizontal and vertical bars 6 and 7. The sides are very rigid by reason of the straps 10, flanges 2, and fillers 3.

We have shown all the rivets countersunk, but they may be otherwise applied, if desired. Parts, as the straps, or other bars or plates, may be omitted without materially affecting the spirit of the invention.

We do not restrict ourselves to the precise details shown and described.

We claim—

1. An annealing box, having its sides composed of a series of channel bars, L-bars on whose horizontal member the said sides rest

and horizontal bands secured edgewise to the vertical member of the L-bars and, the lower portions of the ends.

2. An annealing box, having its sides composed of a series of channel bars, L-bars on whose horizontal member the said sides rest horizontal bands secured edgewise to the vertical member of the L-bars and, the lower portions of the ends, and horizontal base-plates beneath the L-bars.

3. An annealing box, having its sides composed of a series of channel bars, L-bars on whose horizontal member the said sides rest horizontal bands secured edgewise to the lower portions of the sides and ends, horizontal base-plates beneath the L-bars, and vertical plates on the outer sides of said L-bars.

Signed at Youngstown, Ohio, this 12th day of August, 1907.

LOUIS J. CAMPBELL.
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Witnesses:
ARTHUR R. FOSTER,
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