

No. 875,158.

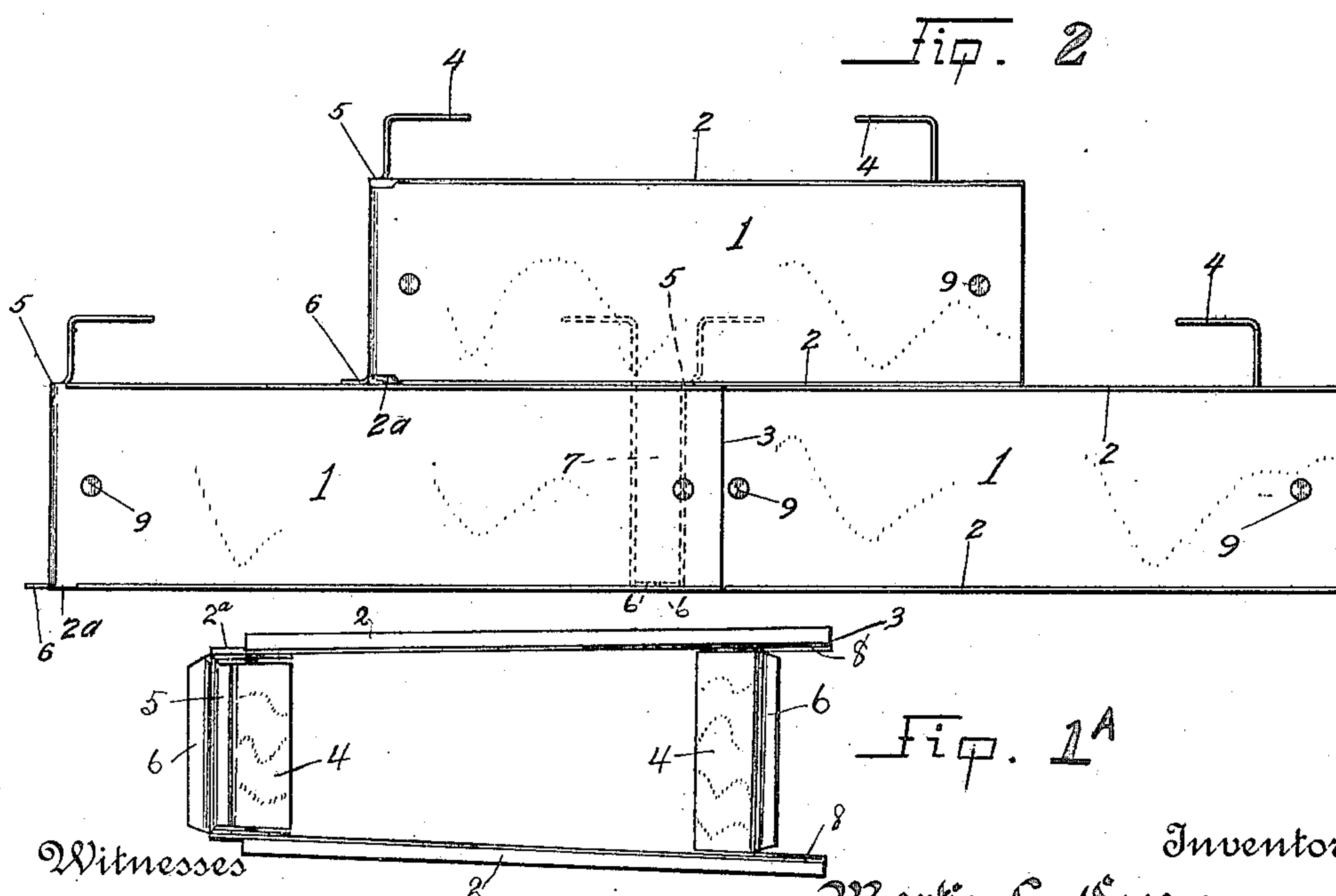
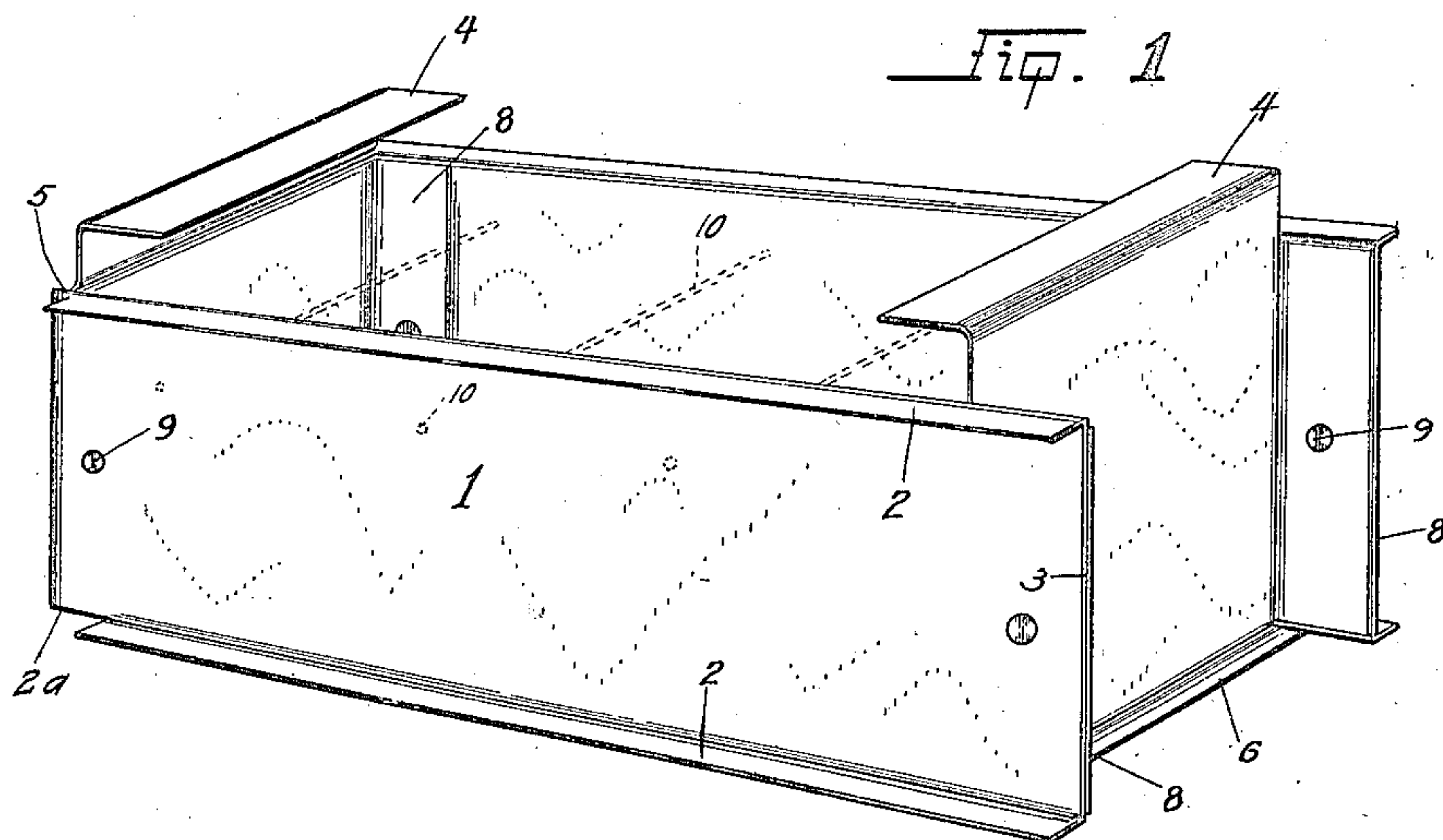
PATENTED DEC. 31, 1907.

M. L. COOPER.

REINFORCING FRAME FOR CONCRETE BUILDING CONSTRUCTION.

APPLICATION FILED APR. 22, 1907.

2 SHEETS—SHEET 1.



Witnesses

Frank H. Carter
J. S. Webster

Inventor

Martin L. Cooper,

By Percy S. Webster
Attorney

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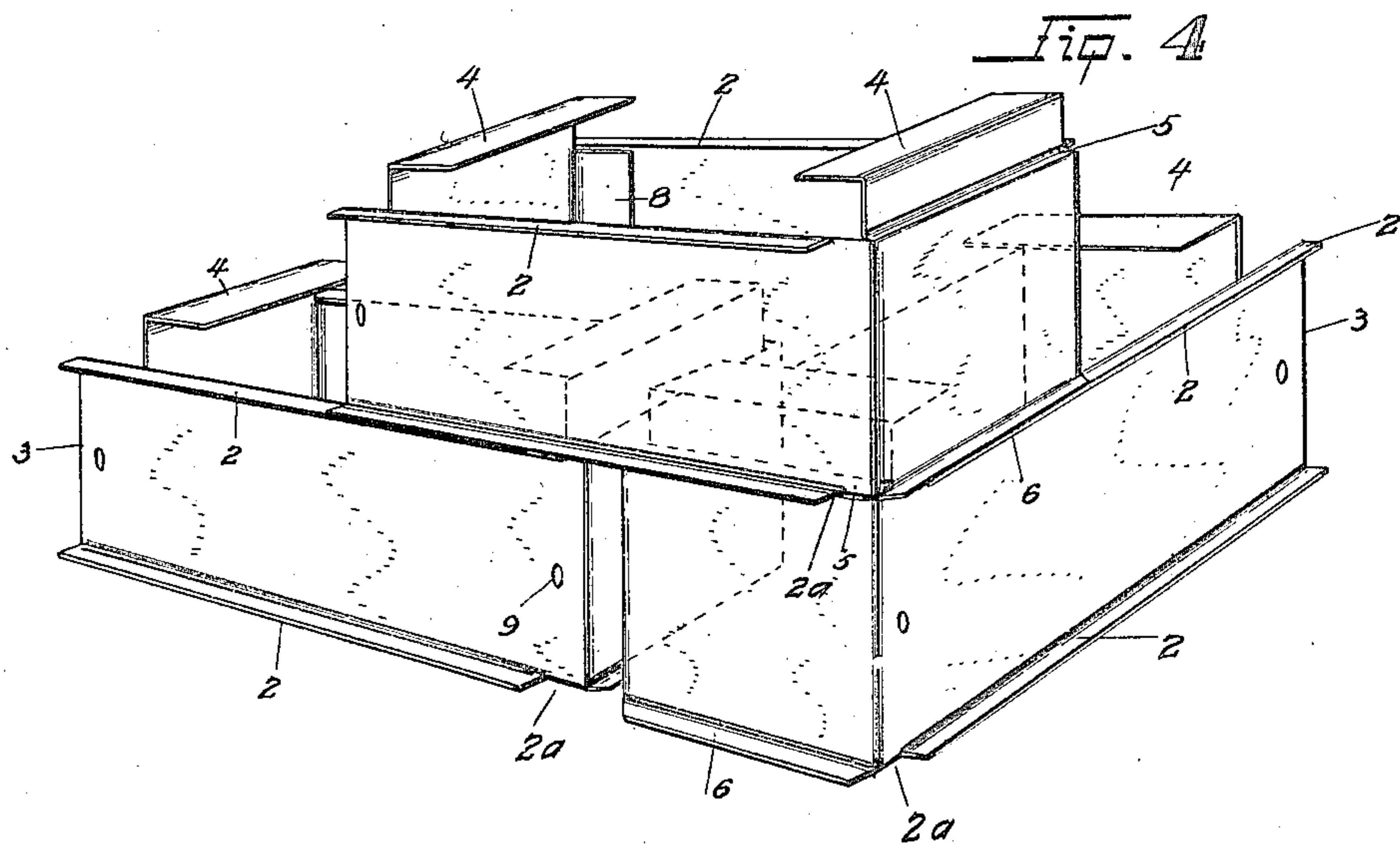
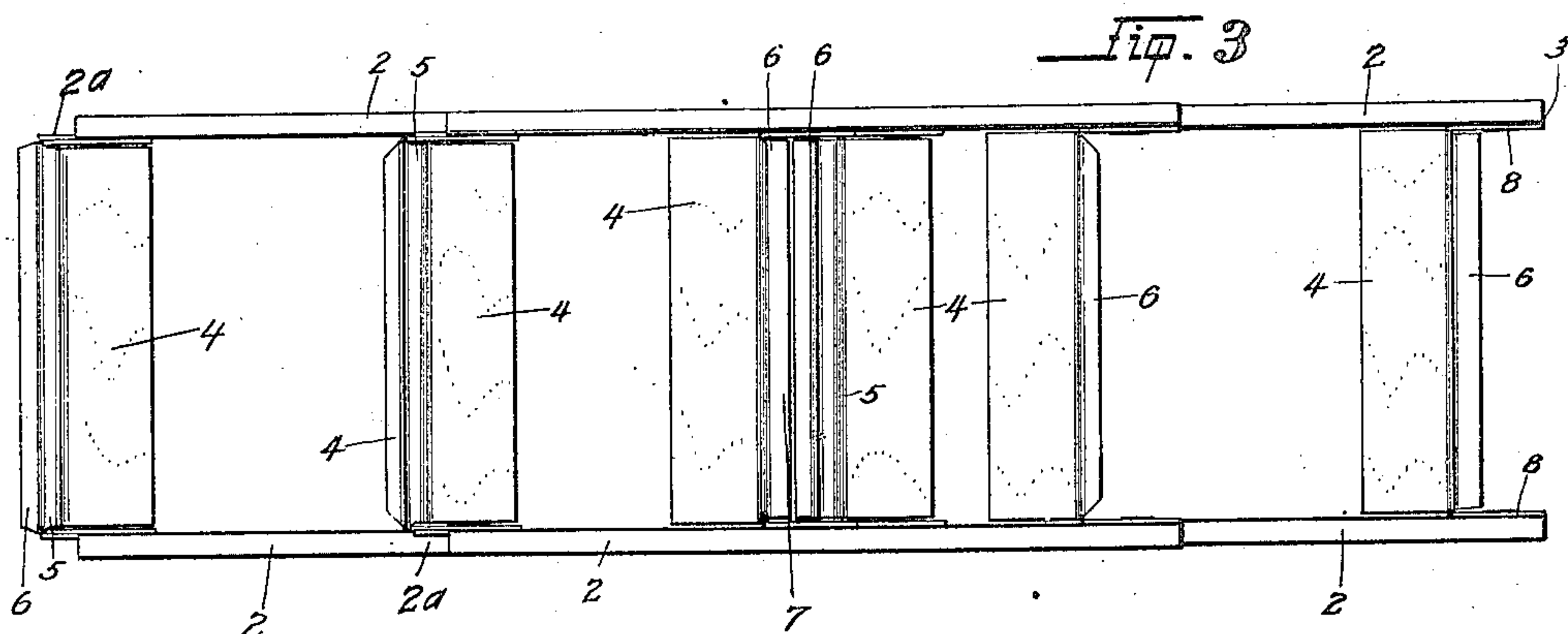
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UNITED STATES PATENT OFFICE.

MARTIN L. COOPER, OF MODESTO, CALIFORNIA.

REINFORCING-FRAME FOR CONCRETE BUILDING CONSTRUCTION.

No. 875,158.

Specification of Letters Patent.

Patented Dec. 31, 1907.

Application filed April 22, 1907. Serial No. 369,636.

To all whom it may concern:

Be it known that I, MARTIN L. COOPER, a citizen of the United States, residing at Modesto, in the county of Stanislaus and State of California, have invented certain new and useful Improvements in Reinforcing-Frames for Concrete Building Construction; and I do declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this application.

This invention relates to improvements in building construction, and particularly to that class known as reinforced building construction, my object being to produce such a device as will make a form for the wall and at the same time provide the necessary reinforcement, thus doing away with the necessity for specially constructed forms or frames and yet make a specially strong reinforcement. This object I accomplish by means of metal reinforcing frames adapted to interlock with each other, said frames being provided with certain angular projections, forming reinforcements; also with outward side projections forming a seat or lock for side plastering; also by such other and further construction as will appear by a perusal of the following specification and claims.

In the drawings similar characters of reference indicate corresponding parts in the several views.

Figure 1 represents a perspective view of one of my improved reinforcing frames. Fig. 1^A is a top plan view of the same. Fig. 2 is a side elevation of a portion of my improved building construction. Fig. 3 is a top plan view of the same. Fig. 4 is a perspective view of the construction of a corner built with my improved reinforcing frames.

Referring more particularly to the reference numerals on the drawings 1 designates the reinforcing frames proper which are of any desired shape, those in the drawings being shown oblong.

On the sides of the frames at the tops and bottoms thereof are outwardly extending edges or flanges 2, save and except a blank space 2^a at one end. At the other end of said frame from the space 2^a the said sides extend beyond the end of said frame, making

projections 3. The ends of said reinforcing frames extend upward above the sides of the same and are provided with inwardly overhanging projections 4, the end at which the spaces 2^a are located having an inward curve forming a shelf 5. Said ends have also projections 6 at their lower ends.

In practice the reinforcing frames proper taper slightly from the ends having the projections 3 to the other ends. When a wall is to be constructed the projections 3 are telescoped over the frame into the space 2^a, this being permitted by reason of the taper just described, the projections 6 of each frame meeting end to end as shown, the whole forming a space or interval 7, the projections 6 forming the bottoms thereof. The said reinforcing frames in wall construction are laid alternately, those on top of the next tier below being disposed midway over the spaces 7. As the frames are laid they are filled with the concrete or other material, the same filling into the spaces 7, and thence over and under the projections 4, thus locking each adjacent frame, and the ones above said spaces, all being firmly secured together as one wall, the whole number of frames, arranged as described, forming one solid reinforcement. The sides may then be plastered with any suitable finishing material, the projections 2 forming seats or locks for said plaster, and at the same time adding strength and durability to the device.

In forming corners one of the reinforcing frames is disposed at right angles to the other and fits over the projection 4 and rests on the shelf 5 as shown in Fig. 4. This makes an admirable, smooth and accurate corner. The ends of said reinforcing frames 1 are shown in the drawings as being connected to the sides by means of tongues 8 riveted to the said sides at 9. However, any suitable joining means may be used. Also any size or shape of frame may be used, embodying, of course, the same construction set forth herein. Another advantage gained by the use of my improved construction is that should it be desired to build a thick wall, dam or levee any number of the tiers of my improved frames could be filled any distance apart, and after the forms had been filled with cement and the same had hardened, the intermediate space could be filled with the plastic cement, the projections 2 forming a lock or seat therefor.

In case I should desire to construct the re-

inforcing frames of an extreme length I would provide a series of cross reinforcing wires 10, (Fig. 1) for the purpose of making the same of sufficient strength.

5 Thus it will be seen that I have produced a building construction wherein the reinforcing frames for the concrete are also used for reinforcement purposes. The construction is especially adapted for fire and earthquake proof buildings, or for dams, culverts, levees, chimneys, or the like, where a solid, resistant construction is necessary.

15 While in this description I have set forth the present and preferred construction of the reinforcing frames, still in practice many small deviations therefrom may be resorted to at will within the scope of the claims without departing from the spirit of the invention,

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

1. Reinforcing frames comprising the frames proper, outwardly projecting edges 25 on the sides of said frames, said frames tapering from one end to the other, the sides of said frames projecting beyond the widest ends of said frames.

2. In building construction, reinforcing 30 frames for concrete consisting of the frames proper, interlocking means carried by the ends of said frames and angularly projecting anchoring means carried by the sides and top of said frames.

35 3. In building construction, reinforcing frames for concrete consisting of the frames proper, one upwardly projecting end thereon, said end curving slightly inward forming a shelf, an overhanging projection from the

top of said end, the other end thereof having 40 outwardly projecting side and bottom flanges, and an inwardly projecting top flange.

4. In building construction, reinforcing frames for concrete consisting of the frames proper of rectangular cross section, upwardly projecting ends thereon, overhanging 45 projections on the tops of said ends, and outwardly projecting edges on the lower ends of said ends of the frames.

5. In building construction, reinforcing 50 frames for concrete consisting of the frames proper of rectangular shape, upwardly projecting ends thereon, overhanging projections on the tops of said ends, outwardly projecting edges on the bottoms of said ends, 55 the sides of said rectangular frames projecting beyond one of said ends, said frames slightly tapering from said projecting side portions to the other end of said frames.

6. In building construction, reinforcing 60 frames for cement consisting of the rectangular frames proper, upwardly projecting ends provided with overhanging projections at the top thereof, outwardly projecting edges on the bottoms of said ends, forwardly 65 projecting edges on the sides of said rectangular frames providing a shoulder at one end thereof, the sides projecting forward from the other end of said rectangular frames, said frames tapering slightly from said ends 70 from which said sides project, to the other ends of said frames, as fully set forth.

In testimony whereof I affix my signature in presence of two witnesses.

MARTIN L. COOPER.

Witnesses:

PERCY S. WEBSTER,

FRANK H. CARTER.