

No. 836,702.

PATENTED NOV. 27, 1906.

W. OSTENDORFF.
WATER COOLING APPARATUS.
APPLICATION FILED FEB. 6, 1906.

Fig. 1.

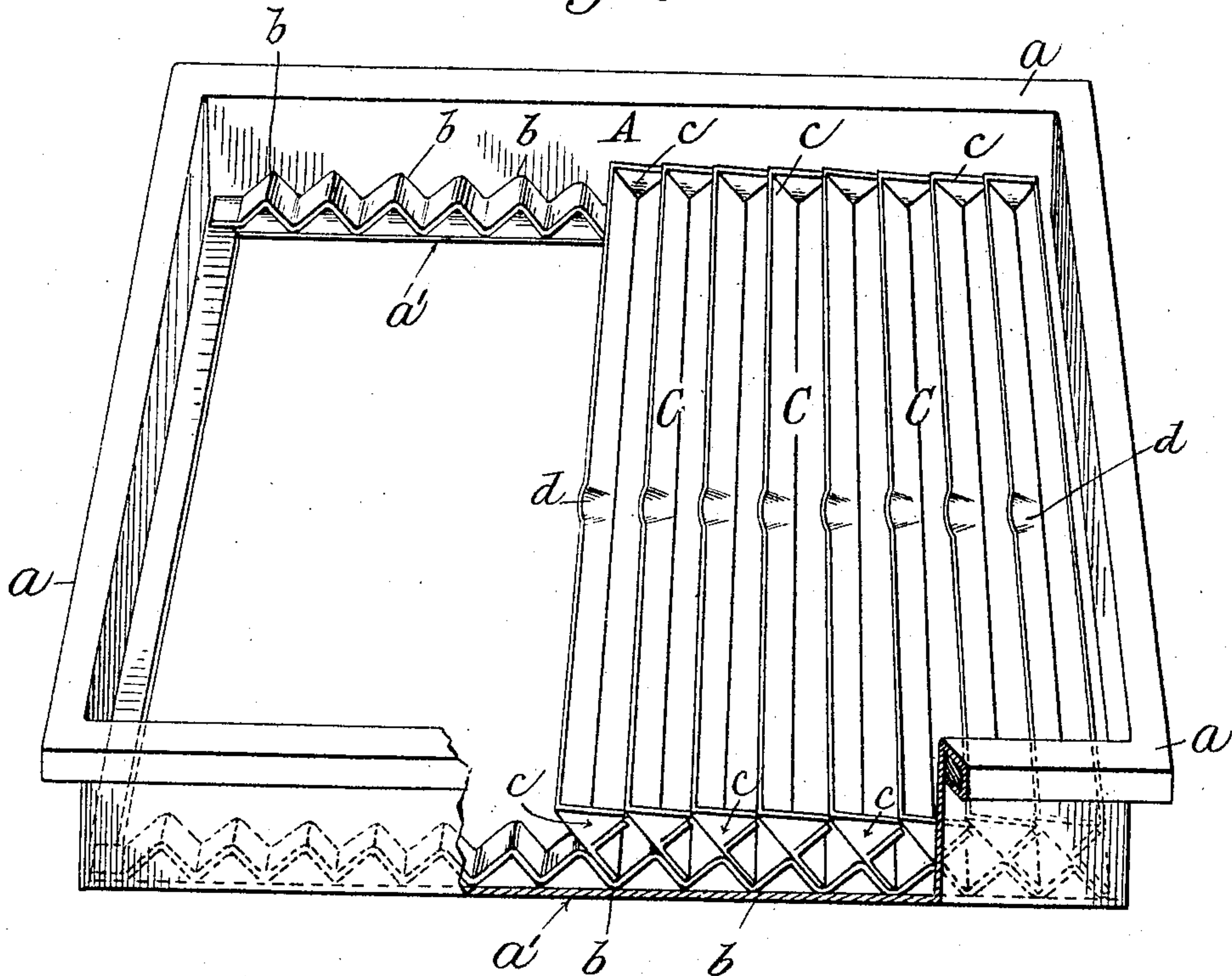
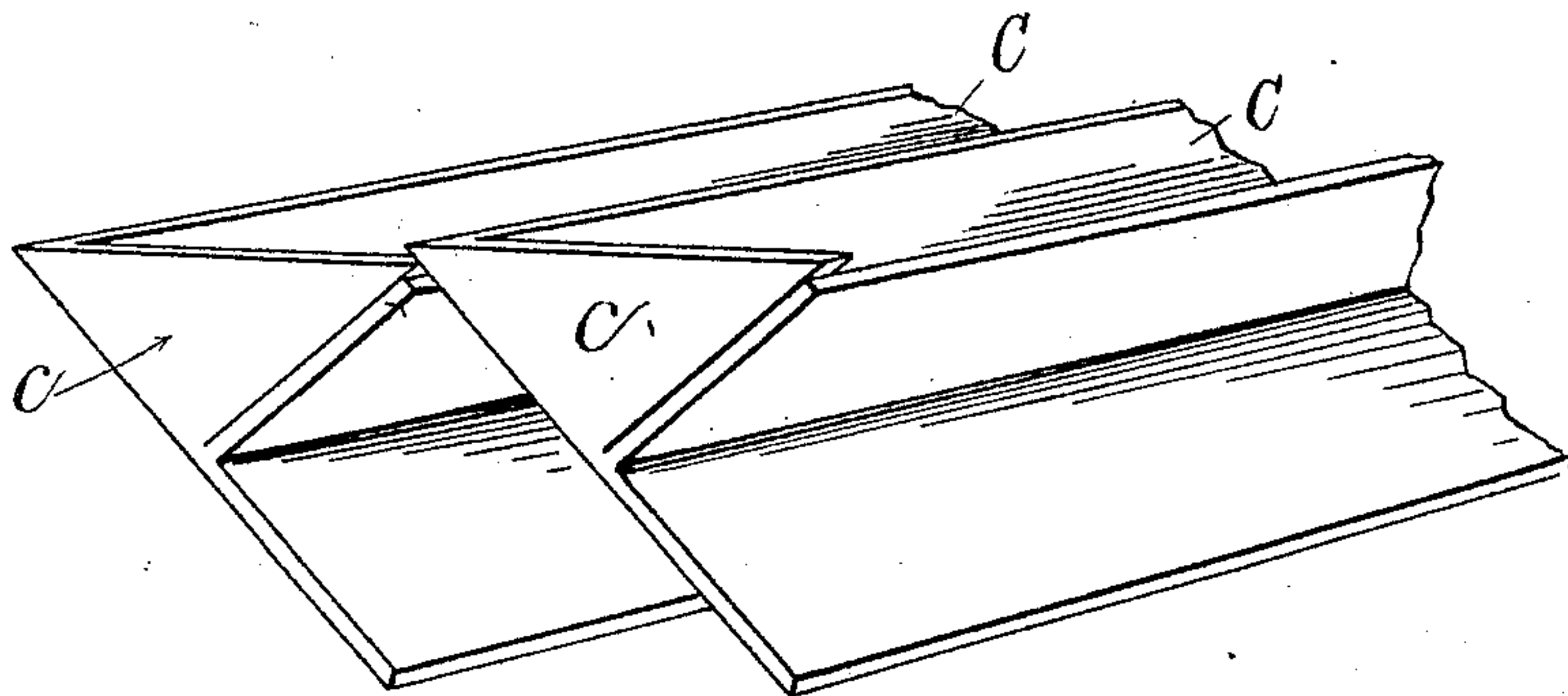


Fig. 2.



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UNITED STATES PATENT OFFICE.

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WATER-COOLING APPARATUS.

No. 836,702.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM OSTENDORFF, a citizen of the United States, residing at Union Hill, in the county of Hudson, State of New Jersey, have invented certain new and useful Improvements in Water-Cooling Apparatus, of which the following is a specification.

My invention relates to water-cooling apparatus of the general class described in my Letters Patent from the United States No. 661,192, of November 6, 1900, my improvements being directed particularly to certain changes in the distributing-pans employed in connection with the tower of the water-cooler.

In the drawings, Figure 1 is a perspective view of one of my improved pans, a portion of one end being broken away and some of the bottom flanges being removed to better show its construction. Fig. 2 is an enlarged view of two of the bottom flanges in position.

The same parts are designated by the same reference-letters in both figures.

A is the framework of the pan, which preferably has a reinforced or stiffened edge *a* and is provided with an intumed bottom flange *a'*. Upon this flange *a'* at opposite sides of the pan I place a bearing or rack *b* of strip iron or similar material, adapted to receive the ends of the bottom bars and hold the same in their properly-inclined position.

CC are the bottom bars, which are formed of T-iron bars, one flange of which is bent up at each end at *c*, so as to close the angle between the web and that side of the base and project a short distance above the top of the web. When the bottom bars thus formed are placed in position within the pan-frame A with their ends resting upon the rack *b*, the base-flange of one bar will overlap the web of the preceding bar, and resting upon the point of the end member *c* will leave a narrow opening between such base-flange and web.

d d indicate bent or downwardly-protuberent portions of the base-flanges, resting upon the upper edge of the underlying webs, so as to prevent the closing of the openings between the flanges and webs by the weight of the water caught in the pan or otherwise.

This construction divides the bottom of the pan into a number of V-shaped troughs or gutters, on each of which the edge formed by the web of the T-bar lies lower than the opposite edge, so that water falling into the gutter flows over the web edge and falling

upon the base-flange beneath it runs down and drips off the flange into the next pan and finally into the tank at the base of the tower.

This construction gives an opportunity for mud or sediment which may be in the water to settle and collect in the bottoms of the troughs without closing up the openings, and this is particularly desirable where there is any considerable quantity of sediment carried by the water, for such sediment will sometimes entirely clog up the holes in a perforated pan and necessitate the shutting off of the water and the cleaning of the pan.

Water-towers of this type are usually placed in elevated positions, often upon the roofs of buildings, where it is inconvenient and difficult to handle large and cumbersome pieces of material, such as a completed pan with the bottom secured thereto; but by means of my improvement the frame of the pan can be first raised into place and set in its place within the tower and the bottom bars then placed one by one in position within the frame, it being unnecessary to bolt or rivet them in place, their own weight being sufficient to maintain them in proper position. This construction also renders it easy to replace a worn or damaged pan-frame or old or corroded bottom bars without disconnecting or damaging the framework of the tower.

To secure the better breaking up of the water in its descent through the tower, each succeeding pan may be set with its bottom bars at right angles to those in the pan above.

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

1. The combination, with a water-tower, of a pan-frame provided with an inwardly-turned lower edge and with a bottom consisting of a series of detachable members embodying transverse troughs arranged with overlapping edges and supported by the said inwardly-turned pan-frame edge.

2. The combination, with a water-tower, of a pan-frame provided with a bottom consisting of a series of detachable flange members embodying transverse troughs arranged with separated and overlapping edges.

3. The combination, with a water-tower, of a pan-frame provided with end racks therein and with a bottom consisting of a series of detachable members forming transverse troughs and seated in said end racks.

4. The combination, with a water-tower, of a pan-frame provided with a bottom con-

sisting of a series of detachable members, each embodying a V-trough with an integral drip-flange below one edge thereof, said troughs being arranged with relatively overlapping edges.

5 5. The combination, with a water-tower, of a pan-frame provided with a bottom consisting of a series of detachable members each embodying a base and a web-flange
10 forming a trough, and end closures for said trough, and each member being disposed with one of its trough edges lower than the other.

6. The combination, with a water-tower,
15 of a pan-frame provided with a bottom consisting of a series of detachable members each embodying a base and a web-flange with closed ends in the angles between the base and web-flange on one side of the web-
20 flange.

7. The combination, with a water-tower, of a pan-frame provided with a bottom con-

sisting of a series of detachable members each embodying a base and a web-flange and having its ends closed by bending up the base 25 on one side of the web-flange so as to project above the web-flange.

8. The combination, with a water-tower, of a pan-frame provided with a bottom consisting of a series of detachable T-bars with 30 closed ends on one side of their webs, forming troughs, disposed with overlapping edges and means for separating the adjoining edges of the troughs.

9. The combination, with a water-tower, 35 of a pan-frame provided with a bottom consisting of a series of detachable members disposed with overlapping, separated edges and downwardly-inclined distributing-flanges.

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Witnesses:

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