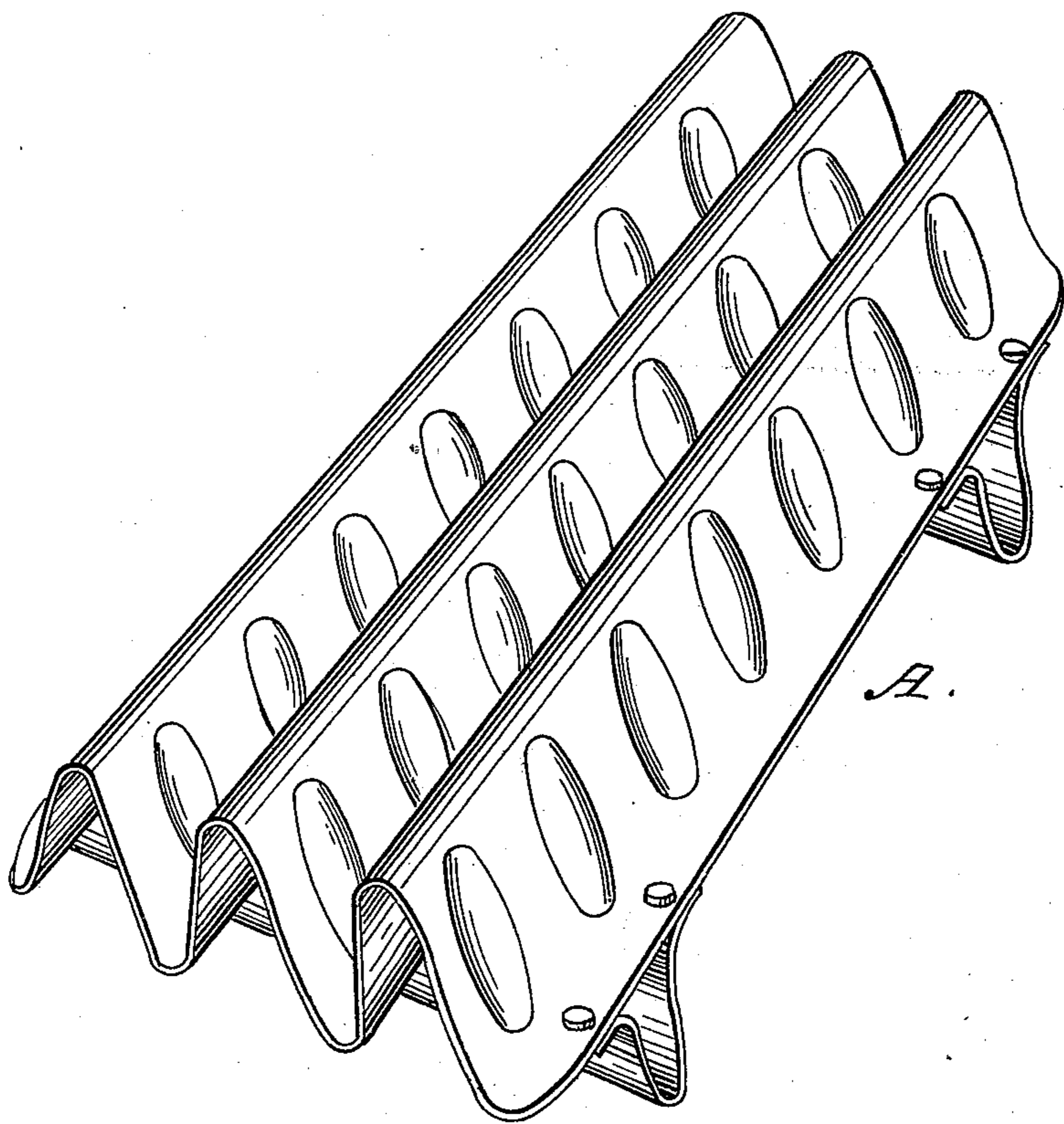


J. S. VERNAM.
Corrugating Iron.

No. 31,068.

Jan
Patented June 1, 1861.



witnesses
Donald Mann
Henry O'Reilly

Inventor
John S. Vernam

UNITED STATES PATENT OFFICE.

JOHN SANDS VERNAM, OF ROCHESTER, NEW YORK.

CORRUGATING IRON.

Specification of Letters Patent No. 31,068, dated January 1, 1861.

To all whom it may concern:

Be it known that I, JOHN SANDS VERNAM, of the city of Rochester, county of Monroe, and State of New York, have invented a
5 new and Improved Form for Corrugated Iron; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing.

10 The nature of my invention consists in the combination of curved and straight lines in corrugated iron, in the manner hereafter described, and shown in the accompanying drawings.

15 In order to secure the greatest strength and rigidity in corrugated iron, the curve should be as short as possible without injuring or weakening the texture of the metal; and the straight lines should form,
20 as nearly as possible, perfect tangents to the curves; so that the straight portions of the iron, corrugated according to my method, will form perfect braces to the curved portions,—thus obtaining, from a
25 given amount of iron so corrugated, far greater strength and rigidity than could be obtained from the same amount and thickness of metal by any heretofore known form of corrugation; but, as the straight or tangential portions of the iron so corrugated
30 would be liable (under a certain and sufficient amount of pressure) to bend or cripple, I put a second or transverse corrugation in the straight or tangential portions of iron
35 already corrugated. That is to say: I put a corrugation or indentation resembling a spoon-bowl—[not confining myself however to any particular form]—in the straight or tangential portions of corrugated iron, in
40 a transverse or nearly transverse direction to the main or original corrugation—the spoon-bowl or transverse corrugation to be put alternately or otherwise on either side of the sheet of iron so corrugated: by which
45 means I obtain a great increase of strength and rigidity in the straight or tangential portions of the corrugated iron.

It will be seen that what I term the “sec-

ond,” or “transverse,” corrugation may be put on a sheet of iron before or after the
50 main corrugation is made; and I use the word second not with reference to time, but importance. I also put the spoon-bowl corrugation or indentation in the surface plate, which may be, and often is, used in connection with corrugated iron, in the following
55 way or in some way substantially the same, to wit: The said indentation, or corrugation, to be put alternately or otherwise on either side of the surface plate, between the
60 lines upon which it is riveted or fastened to the corrugated iron—thus giving the surface plate great additional strength and rigidity, in a transverse direction to the main or original corrugation.
65

I am aware that zinc and boards have been indented or corrugated in a manner similar to the forms of corrugation described by me—those forms being used separately and not in combination; and whenever used,
70 have been so used, not for obtaining strength and rigidity, but for purposes of ornament, or to secure roughness of surface, as in washboards. But I use the above combination of forms for the purpose of obtaining
75 the greatest amount of strength and resistance of pressure from a given amount and thickness of iron; as before mentioned—substantially as shown and represented in the accompanying model and drawing.
80

What I claim as my invention and improvement, and desire to secure by Letters Patent, is—

A compound corrugation as above described: that is to say, the combination of
85 two distinct corrugations in one sheet of iron, where the line of direction of one corrugation is at right angles or transverse, or nearly so, to the line of the direction of the other corrugation,—substantially as described above and shown in the accompanying drawing.
90

JOHN SANDS VERNAM.

Witnesses:

DONALD MANN,
HENRY O'RIELLY.