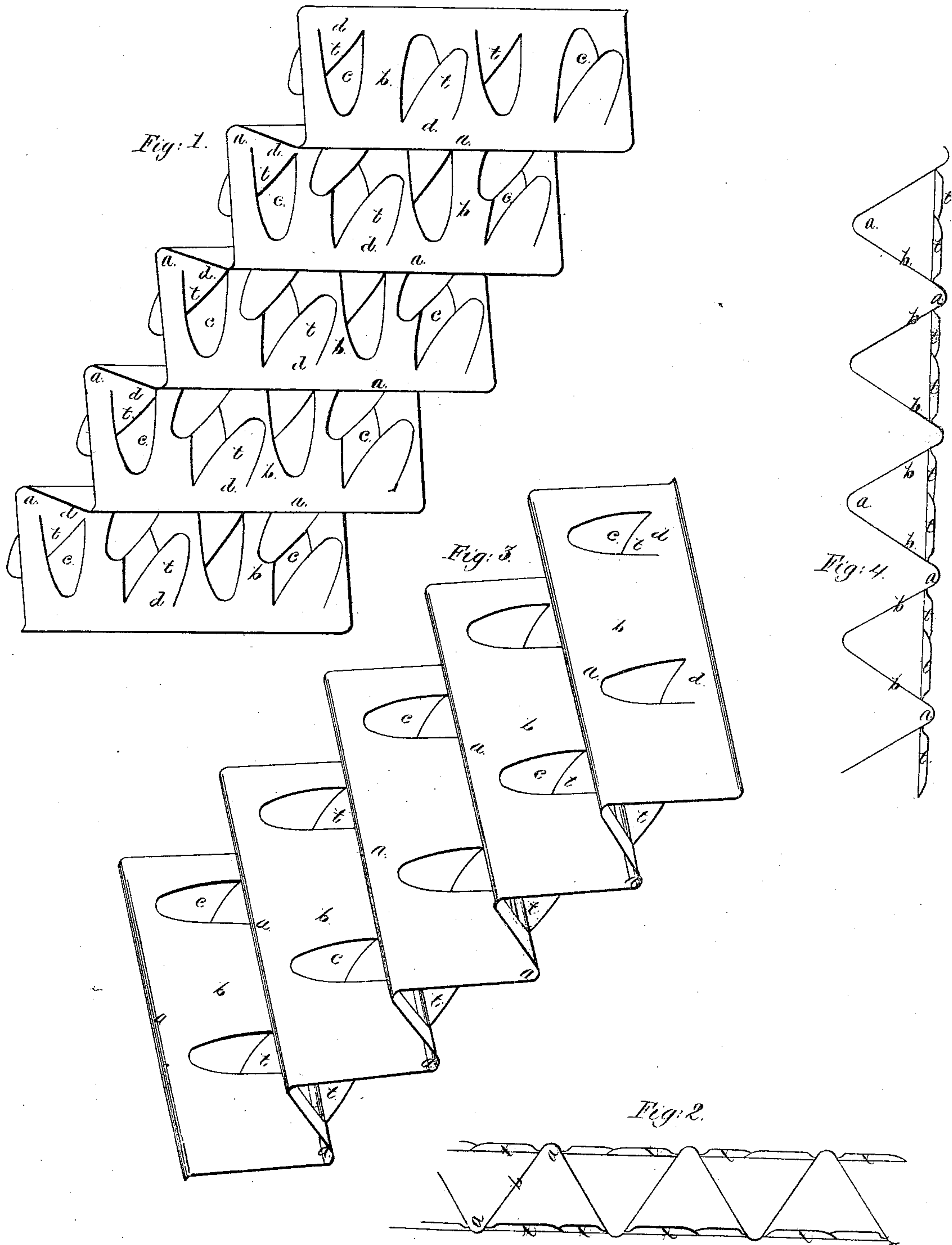


W. E. Worthen.
Corrugated Lathing.

Nº 16,702.

Patented Feb. 24, 1857.



UNITED STATES PATENT OFFICE.

W. E. WORTHEN, OF NEW YORK, N. Y.

METALLIC LATHING.

Specification of Letters Patent No. 16,702, dated February 24, 1857.

To all whom it may concern:

Be it known that I, WILLIAM E. WORTHEN, of the city, county, and State of New York, civil and mechanical engineer, have invented a new and useful Metallic Partition, Studding, and Lathing, which may also be employed as a furring for ordinary partitions or as a lath or for similar purposes, and that the following specification, taken in connection with the drawings, is a full, clear, and exact description thereof.

In the drawings Figure 1 is a perspective view of the studding and lathing; Fig. 2 is a plan of the same; Fig. 3 is a perspective view of the lathing or flooring; Fig. 4 is a plan of the same.

At the present time iron is employed in fire proof buildings as beams, floors, lathing, studding, etc., and it is gradually coming into extensive use.

The object of my invention is to afford a better and cheaper contrivance as a substitute for the metallic laths now used, a contrivance which will also serve as both lathing and studding, or as an iron floor with ceiling lath already attached below, and if desired with cement retainers for the floor above; and the nature of my invention consists in piercing corrugated iron or other metal in the folds thereof in such wise as to leave free small tongues, which are afterward so bent as to be parallel or nearly parallel with a plane passing through the angles of the corrugations, whereby an article is formed substantially such as is hereinafter specified, and the nature of the second part of my invention consists in dishing or concaving such tongues, so that they may be stronger than if left as plane surfaces substantially in the manner hereinafter specified.

In order to form a studding and lathing of an ordinary partition to be plastered on each side, I take ordinary sheet iron and corrugate it to any extent demanded by the strength of the partition, and either previous to or after the corrugation I pierce it with slits in the shape of a tongue by any usual tools or machinery. I then bend out these tongues on their bases as a hinge, in any way that metal is usually bent, so that they stand out from the general contour of each corrugation and lie in planes parallel or nearly so to those passing through the front and rear of the corrugated plate considered as a whole. These slits may be

pierced in any convenient manner; I prefer to use a punch and die and to form them before the metal is corrugated, and I also prefer to form my punch and die in such a manner that each tongue shall be dished at the same time that it is slit so as to increase its strength and its rigidity; after the metal is pierced and corrugated the tongues may be bent to their proper place by rods which pass in succession through the holes left by the bending of the tongues.

In the drawings *a a* are the angles of the corrugations; at *b b* is shown that part of the metal that extends from angle to angle; at *c c* are shown the apertures of the same shape as the tongues, around the edges of which the piercing or slitting was performed; at *d d* are what I term the bases of the tongues, while the tongues themselves are shown at *t t*. The shading on the perspective drawings, and the apparent thickness of the tongues in the plans, show that these tongues are dished something into the shape of a shovel or scoop, thus increasing their stiffness and strength.

If the article is to be employed as lathing merely, it may be made of very thin iron with corrugations of small depth, and with tongues arranged as in Figs. 3 and 4, that is to say all on one side of the article. When used it may be secured by nails passing through the angles of the corrugations farthest from the tongues to any ordinary wall or furring, and it is obvious will afford a strong ground for plastering, and one to which cement or mortar will adhere firmly.

If it be designed to stud and lath all in one, then the corrugations must be deeper, the iron should be stronger, and if the partition is to be plastered on both sides the tongues should be arranged as in Figs. 1 and 2; then the corrugated iron itself will act as studs, while the tongues will serve as lathing.

Floors are now often formed of corrugated iron reaching from beam to beam, or from wall to wall, and are usually furred and lathed with iron or wood on their lower sides while on the upper side cement or concrete is laid in to fill up the corrugations, and upon this tiles or a wooden flooring is laid. Now by my invention all furring and lathing below the floor may be dispensed with, and the floor itself will serve for furring and the tongues for lath, as I intend to use iron of sufficient strength corrugated to

a proper depth and tongued either on one or both sides, in which latter case the upper tongues would serve to confine the concrete or cement more firmly than it now is.

5 The precise shape and number of tongues employed in each corrugation is wholly unimportant; they must be sufficiently numerous and of sufficient strength taken collectively to support plastering firmly, and they
10 may be at various angles from the plane of the corrugations proper, so long as they project sufficiently to hold the plaster. The shape and degree of bending on the bases of the tongues shown in the drawings is by me
15 deemed the best, but I do not limit myself to the employment of such shapes or degree of bending only. Neither is it absolutely necessary that the tongues should be dished, but when dished they are more serviceable.
20 The precise arrangement of the tongues is moreover not absolutely essential, they may be in one or more rows, or disposed in zig zags, or quincunxes, or otherwise. Now as before stated I know that corrugated iron
25 has been used for floors, it is also employed for partitions, but is as far as I know lathed

either with iron or wooden laths riveted on. I know also that iron lathing having a section like a C and other sorts of iron lathing have been used. I therefore claim none of these as my invention. But 30

What I do claim as of my own invention is—

1. Corrugated metal provided with tongues slit out of the body thereof and bent away 35 from their original position substantially as herein specified and constituting as a whole an article to be used in buildings substantially in the manner and for the purposes herein set forth. 40

2. I also claim such tongues formed in substantially such a manner on and out of corrugated metal when they are dished or concaved substantially in the manner and for the purposes herein described. 45

In testimony whereof I have hereunto subscribed my name in the city of New York on this 21st day of January, A. D. 1857.

W. E. WORTHEN.

In presence of—

B. ALTHAUSE,
A. LOU PUGET.