(No Model.) 2 Sheets—Sheet 1.

A. R. FORDYCE.

METALLIC LATHING.

No. 553,306. Patented Jan. 21, 1896.

Fig. 1.

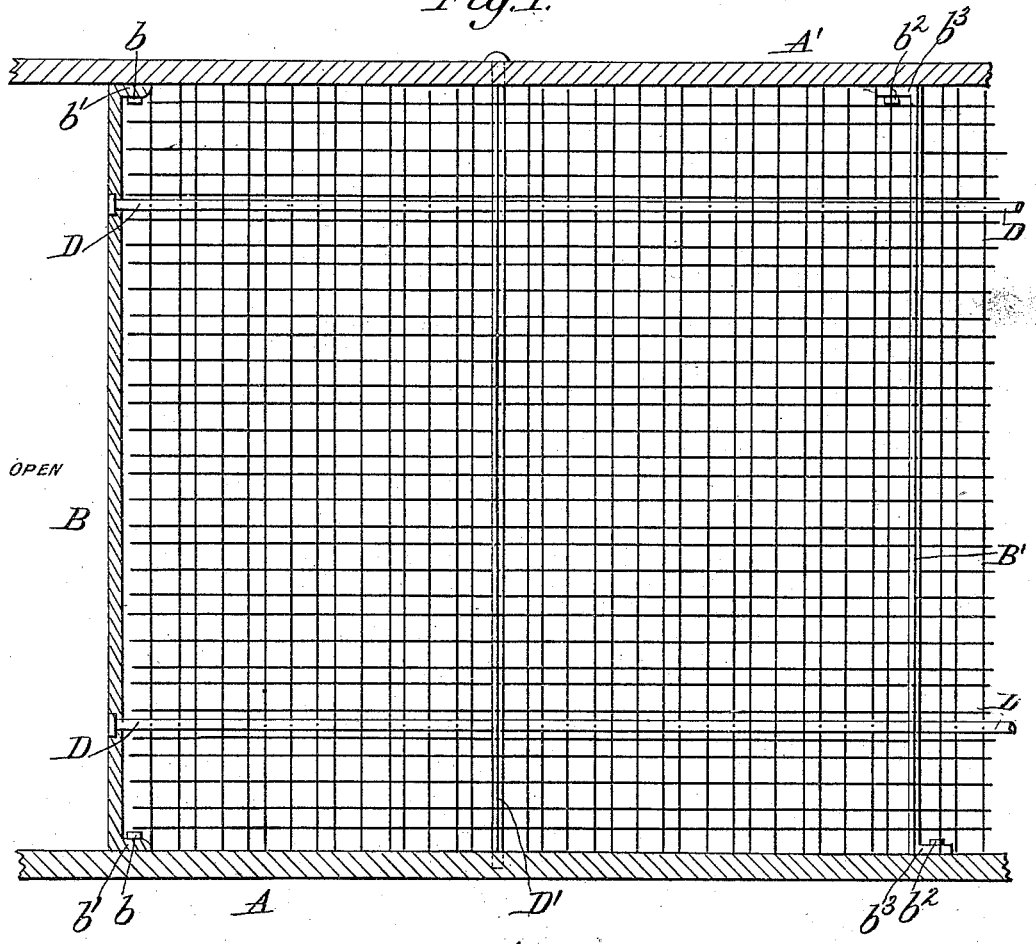


Fig. 2.

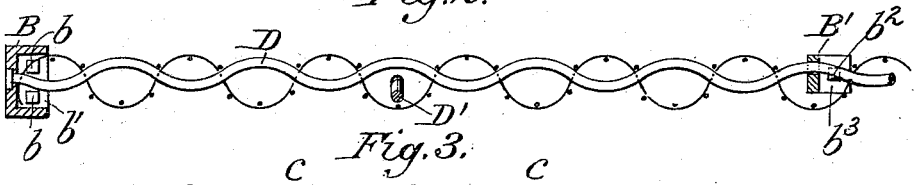
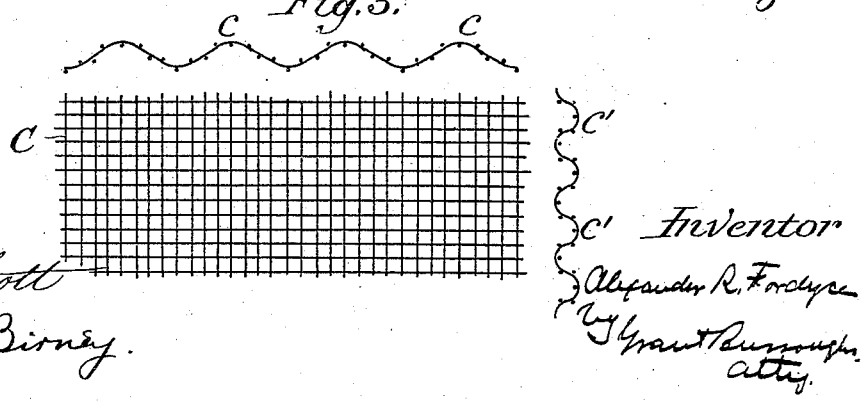


Fig. 3.



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(No Model.) 2 Sheets—Sheet 2.

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METALLIC LATHING.

No. 553,306. Patented Jan. 21, 1896.

Fig. 4

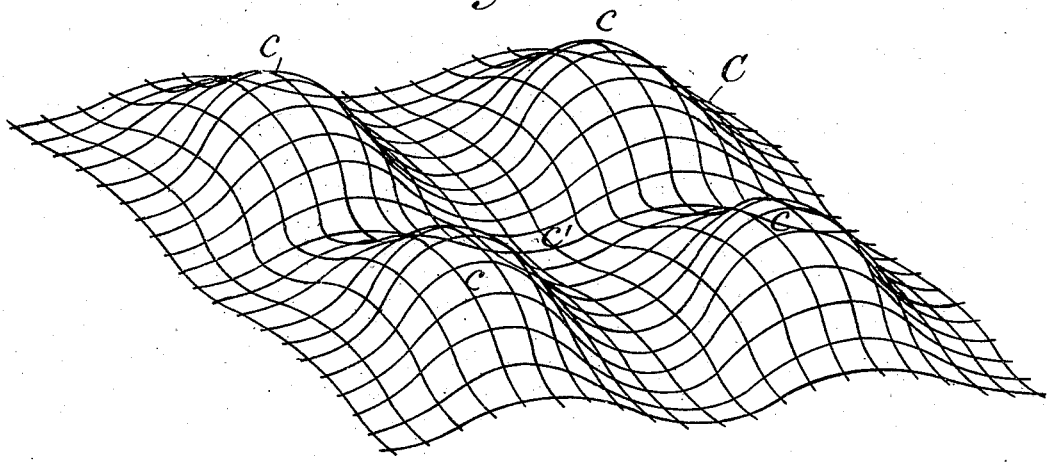


Fig. 5.

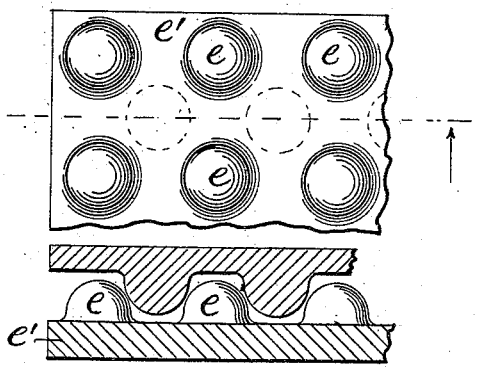
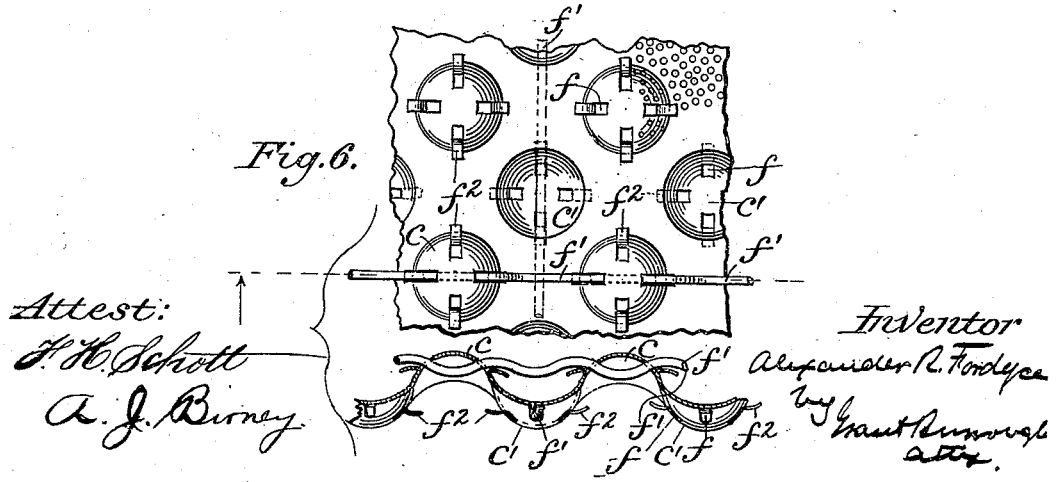


Fig. 6.



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UNITED STATES PATENT OFFICE.

ALEXANDER R. FORDYCE, OF NEWARK, NEW JERSEY.

METALLIC LATHING.

SPECIFICATION forming part of Letters Patent No. 553,306, dated January 21, 1896.

Application filed November 16, 1895. Serial No. 569,220. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER R. FORDYCE, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Metallic Lathing, of which the following is a full, clear, and exact description, such as will enable those skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings.

The invention relates to improvements in the construction of fireproof walls, partitions, ceiling, floors, &c., of that class which are formed of a plastic filling bonded by a metallic skeleton.

It relates more particularly to improvements in skeletons which are formed of corrugated material. As heretofore constructed skeletons of this class have been made with the corrugations extending in but one direction. The principal objection to these lies in the fact that a wall in which they are incorporated consists of alternate rows or ribs of unbonded filling. Such constructions are comparatively easily broken by applying pressure opposite to one of these ribs on the opposite side of the wall, where the filling is very thin along the ridge of the corrugated metal. In the invention in the present instance it is proposed to overcome this difficulty by breaking the contiguity of these ribs of solid plaster, and at the same time preserving the important features and advantages secured by the use of the corrugated material.

The invention consists primarily in forming the skeleton of wire fabric or reticulated metal plate, corrugated doubly, the two sets of corrugations running at right angles to each other. By using such a skeleton the entire filling will be thoroughly bonded, as no rib of solid unbonded filling, such as is formed in the ordinary corrugated skeleton, will exist.

The invention also consists in providing a means whereby the skeleton can be secured firmly to its supports, so that the contiguity of the filling will in no way be interrupted to any great extent.

The invention also consists in the novel construction, combination, and arrangement of parts, such as will be hereinafter more fully described, pointed out in the appended claims, and illustrated in the accompanying drawings.

In the accompanying drawings, in which similar letters of reference designate corresponding parts, Figure 1 is a side elevation of a section of a partition, showing a skeleton embodying the invention. Fig. 2 is a horizontal section through the same. Fig. 3 shows plan and side views of a section of the skeleton where the number of corrugations extending one way are greater than those running the other way. Fig. 4 is a perspective view showing a section of the skeleton, the corrugations breaking joint. Fig. 5 shows a mold adapted to stamp out the skeleton. Fig. 6 shows a modification in which the wire fabric is replaced by a reticulated metal plate.

Referring to the drawings by letter, A and A′ designate the floor and ceiling beams, respectively, of a partition. Attached to these are the uprights B and B′. The upright B is a channel-iron such as is ordinarily used in forming the facing of a doorway. It is fastened in position by the screws b b, passing through the flanges b' b' into the sills A and A′. The upright B′ is also formed of angle-iron and is similarly attached to the sills by the screws b^2 b^2 passing through the flanges b^3 b^3. To this frame is attached the metallic skeleton or lathing.

The skeleton or lathing consists of the doubly-corrugated fabric or reticulated plate C. It is formed by corrugating the fabric in one direction and then corrugating it in the opposite direction, so that the ribs c c extending in one direction are at right angles to the ribs c' c' extending in the other direction. By corrugating the fabric in this way a very strong skeleton or lathing is secured, and one that will bond every part of the filling. It is to be observed that the projections or corrugations on one side of the skeleton break joint with the projections of the opposite side.

The skeleton is placed on the uprights B and B′ and its edges are secured thereto and to the sills A and A′ in any suitable manner. Auxiliary supports are provided where extra strength is needed. These supports consist of the corrugated rods D, D and D′. The rods D D pass longitudinally through the skeleton.

Each is fastened at an end to the channel-iron B, preferably by riveting. They are also supported by passing through suitable openings in the intermediate upright B′. In its passage from one upright to the other each horizontal support passes through the apexes of the intervening corrugations or projections of the skeleton, or it may only engage with them at intervals. The vertical support D′ is made fast to the sills A and A′, and in its passage from one to the other it also passes through the apexes of the intervening corrugations or projections. In order that a proper clearance of the auxiliary supports may be secured, and so that the contiguity of the filling will not be interrupted to any great extent, they are placed in opposite sides of the skeleton, as shown in Fig. 2.

It is to be observed that the corrugations may be uneven and that they may be more numerous traveling one way than the other, as shown in Fig. 3.

In Fig. 5 is shown a mold for forming the skeleton. Each element of the same has a series of projections *e e*, extending from the base *e′*. They are so mounted that when they are brought together the projections of one will register between the projections of the other. Corrugating-rolls having the necessary pattern can also be used as well as any other well-known mechanism adapted to the purpose.

In Fig. 6 a section of the skeleton with its auxiliary supports is shown. In this instance the wire fabric is replaced by a reticulated metal plate. When the plate is stamped or formed the drawing of the metal, caused by the formation of the corrugations, is allowed for by the perforations in the metal. In the apexes of the corrugations openings *f f* are formed to allow the passage of the rods *f′ f′*, which form the auxiliary supports. The metal cut away to form these openings is turned back to form keys f^2 f^2 to clinch the filling. It is obvious that a metal plate may be provided with rows of projections—cup-shaped, for instance—reversible and breaking joint, or stagged, without departing from the spirit of the invention.

Lathing of this sort, when made of heavy material, is especially adapted to the construction of floors and ceilings. In the formation of a combined floor and ceiling, for instance, it is necessary to support beneath the skeleton a centering to retain the plastic material in position while it is green. To prevent the skeleton from sagging the centering must be placed directly against the same. The plastic material is then filled in. If the corrugations should extend through the lathing or skeleton only one way, the apexes of these corrugations on one side would contact with the centering, between which the filling could not enter, and consequently there would be long lines of skeleton practically uncovered. By the invention in the present instance this is obviated, as but comparatively small portions of the skeleton come in contact with the centering. For the same reason the construction is especially applicable to be used as ordinary lathing in plastering a plane surface, such as a wooden wall.

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

1. A metallic lathing consisting of the fabric, or reticulated plate, corrugated so that the ribs of one set of corrugations extend through the fabric, or plate, at right angles to the ribs of another set of corrugations, substantially as described.

2. A metallic lathing consisting of the fabric, or reticulated plate, provided with alternating rows of projections and depressions, substantially as described.

3. In a fire-proof construction, the combination of the fabric, or metallic plate, corrugated so that one set of corrugations extend through the fabric, or plate, at right angles to the ribs of another set of corrugations, and the rods passing through the apexes of the projections thus formed, substantially as described.

4. In a fire-proof construction, the combination of the fabric, or the reticulated plate, corrugated so that the ribs of one set of corrugations extend through the fabric, or plate, at right angles to the ribs of another set, and the corrugated rods passing through the apexes of the projections thus formed, substantially as described.

5. In a fire-proof construction, the combination of the fabric, or metallic plate, corrugated so that one set of corrugations extend through the fabric, or plate, at right angles to the ribs of another set of corrugations, and the rods passing through the apexes of the projections thus formed on opposite sides of the skeleton, substantially as described.

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

ALEX. R. FORDYCE.

Witnesses:
GRANT BURROUGHS.
J. ROSS COLHOUN.