

J. G. Vaughan.

Lathing.

No. 16,425.

Patented Jan. 13, 1867.

Fig. 1.

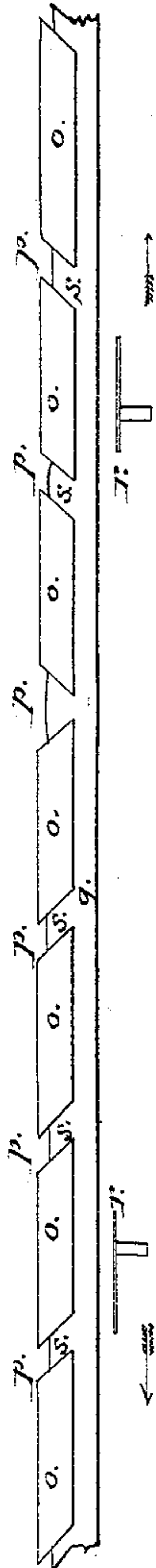


Fig. 2.

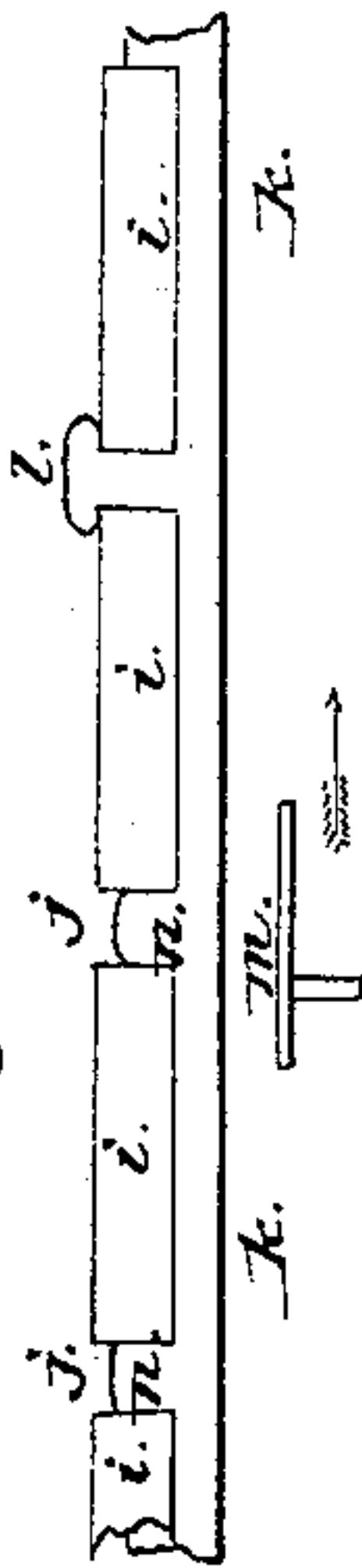


Fig. 3.

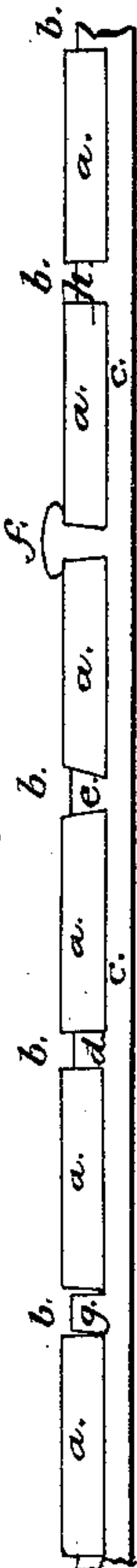
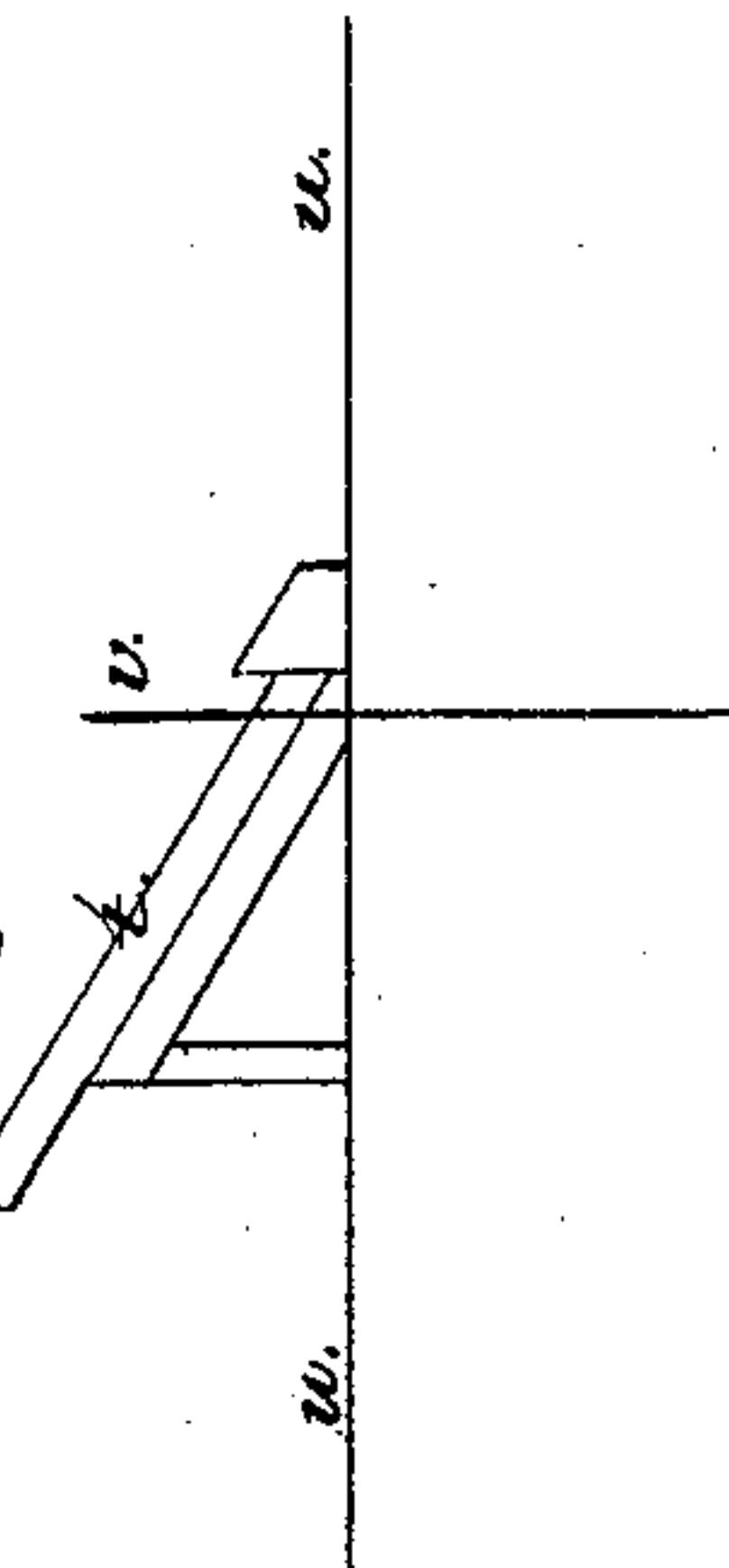


Fig. 4.



Witnesses:
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UNITED STATES PATENT OFFICE.

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MODE OF LATHING AND PLASTERING.

Specification of Letters Patent No. 16,425, dated January 13, 1857.

To all whom it may concern:

Be it known that I, JOHN G. VAUGHAN, of Middleborough, Plymouth county, in the State of Massachusetts, have invented
5 a new and useful Improvement in Lathing for Plastering Ceiling, Walls, and other Surfaces; and I do hereby declare that the following is a full, clear, and exact description, reference being had to the accompanying
10 drawings, making part of this specification, in which—

Figure 1 represents a section of a plastered ceiling with my improved system of laths, taken in a plane at right angles with
15 the longitudinal plane of the laths; Fig. 2 is a like section of a plastered ceiling with sawed laths as heretofore practiced, Fig. 3 a like section with split laths, and Fig. 4 a section of a block from which the laths
20 are cut.

In plastering ceilings and other surfaces but particularly ceilings, it has been the practice in the first place to form a surface of laths or strips of wood or other substance
25 nailed or otherwise secured to the rafters or other bodies, the laths being so placed as to leave interstices between for the entrance of a portion of the plaster to bind and hold the entire coating to the laths. The plaster
30 or cement does not adhere to the surface of the laths with sufficient force, particularly on ceilings, to sustain the weight or resist the concussions or vibrations to which ceilings or walls are often exposed, but if
35 the plaster or cement can be made to enter in sufficient quantity to form a tie on the opposite side then it can only be separated by a force sufficient to break the plaster or cement.

Formerly laths were made by splitting timber leaving the surfaces rugged and irregular so that when in place the interstices
40 between them presented a great variety of forms in which the plaster when properly applied would enter and oftentimes spread, thereby making a series of efficient bonds to tie and hold the coating. Laths thus
45 made have been generally superseded by sawed laths which can be made at much less cost of lumber and labor; but such sawed laths as heretofore made are far inferior to split laths for the reason that their edges are sawed at right angles to their
50 faces so that when in place they form inter-

stices between them with parallel sides for 55 the reception of the plaster, and as the laths absorb moisture from the plaster when first put on, they swell and squeeze the plaster between them when yet soft enough to yield, and in consequence when they dry and 60 shrink they leave the plaster which then holds simply by adhesion to the surface of the laths which is insufficient, and in consequence the plaster often falls in large masses. And even split laths, although su- 65 perior to sawed laths, are defective for the reason that the plaster enters the interstices between them with great difficulty, and as the work of the plasterer is very laborious, particularly on ceilings over head, they 70 often neglect to apply sufficient force to insure the entrance of the plaster in sufficient quantity to form the required bond. And when the plasterer does his work faithfully he often fails to make a good and secure 75 ceiling because the proper form of interstices with such laths is only accidental, and it often happens that the form is the reverse of what is required.

The object of my invention is to form 80 lathing for plastering ceilings and other surfaces which shall avoid the defects above pointed out and heretofore experienced, and by means of which, without extra labor on the part of the plasterer, the plaster or ce- 85 ment shall become thoroughly bound to the laths while at the same time the laths and the plastering may be made as cheap as on the inferior plans heretofore practiced. And to this end my invention consists in form- 90 ing lathed surfaces for the reception of plaster or other cement of a series of laths cut with the surface of their edges parallel but forming on one side an obtuse, and on the other an acute angle with the face to 95 be plastered, so that when in place they shall leave parallel or nearly parallel interstices between them in planes oblique to the intended plastered surface. By this means the laths can be made by sawing as 100 readily as when made, as heretofore, of a rectangular figure in their cross section; may be secured in place with as little labor and expense; the plastering will enter the interstices more readily by the plasterer 105 working toward the acute angular edges that the plaster may enter at an acute angle to the line of pressure exerted by the work-

man, and the plaster which thus enters the interstices will form a series of bonds to tie the coat so that it cannot be drawn off without breaking the plaster itself.

5 In Fig. 3 of the accompanying drawings (a) represents a cross section of a series of split laths, as formerly made, with interstices (b) between of irregular and accidental form, and (c) the coating of plaster
10 applied, and part of which is forced into the interstices, as at (d). From this it will be seen that unless the interstices are oblique to the surface of the plastering so as to form one or two sides of a dovetail, as at
15 (e), it will not form an efficient bond unless a sufficient quantity of plaster passes entirely through and spreads on the opposite side, as at (f), in which case there must be a great expenditure of plaster and labor;
20 but when the sides happen to be parallel and at right angles with the surface, as soon as the laths shrink by drying they leave the plaster in the interstices, as at (g), without any bond to hold the coating.
25 And when the form happens to be as represented at (h) then, even before the laths dry and shrink, the plaster only holds by adhesion to the surface of the laths.

In Fig. 2 the lathing is composed of sawed
30 laths (i) as heretofore and now generally made with the sides of the interstices (j) parallel and at right angles to the surface of the coat of plastering (k), so that unless a sufficient quantity of plaster be forced in
35 to pass entirely through and swell on the opposite side as at (l), there will be no bond formed, and after the laths dry and shrink it will only hold by adhesion to the surface of the laths. And as the edges of the laths
40 are at right angles to the line of travel of the trowel (m) as indicated by the arrow, the plaster will seldom pass through to the other side and will generally only enter to

the extent represented at (n) which will not form a bond. 45

In Fig. 1 (o) represents the lathing on my improved plan with interstices (p) having parallel sides oblique to the surface of the plastering (q), so that as the plasterer works the trowel (r) in the direction of the
50 arrow the plaster will readily enter the interstices, forming bonds (s) in all the interstices, so that the plastering cannot be removed without breaking off the coat from all the bonds, or moving the entire mass ob-
55 liquely.

This form of lath can be as readily sawed as the old rectangular lath by simply making the cuts diagonal as represented in Fig. 4 where (t) represents a cross section of the
60 block of wood, the line (u) the plane of a bench on which the block is placed, and (v) the plane of the saw.

I do not wish to be understood as making claim to the sawing of laths, nor as limiting my claim of invention to making laths
65 of the form specified by sawing, as they may be made otherwise than by sawing, nor to the making of such laths of wood, as other materials may be substituted, although I
70 prefer wood. Nor do I wish to be understood as claiming broadly the securing of plastering by dovetailed interstices between laths or analogous devices, but

What I do claim as my invention and
75 desire to secure by Letters Patent is—

Plastering ceilings or other surfaces on lathing formed and secured so as to leave interstices between them with parallel sides oblique to the surface of the plastering when
80 put on, substantially as and for the purpose specified.

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Witnesses:

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