No. 745,547. PATENTED DEC. 1, 1903.

W. N. WIGHT.

PARTITION AND FURRING.

APPLICATION FILED FEB. 12, 1903.

NO MODEL.

FIG. 1.

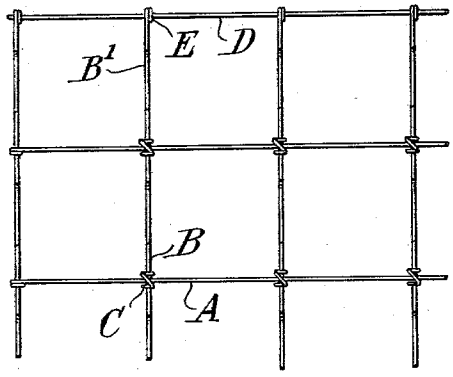


FIG. 2.

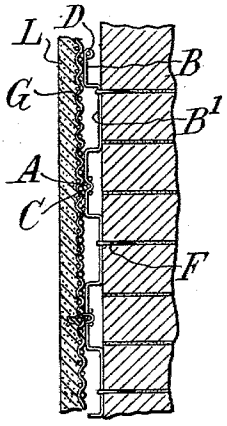


FIG. 3.

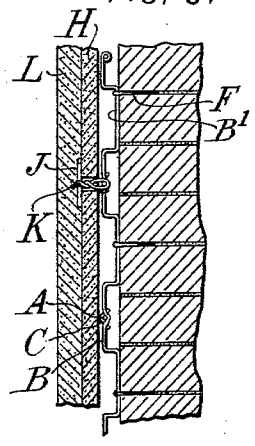


FIG. 5.

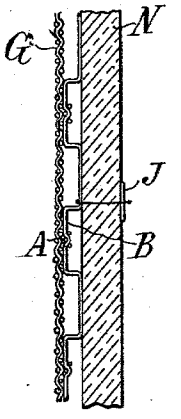


FIG. 6.

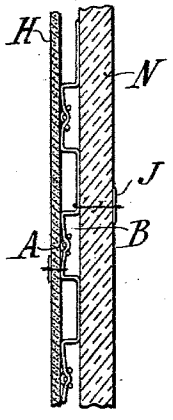


FIG. 10.

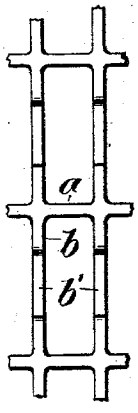


FIG. 4.

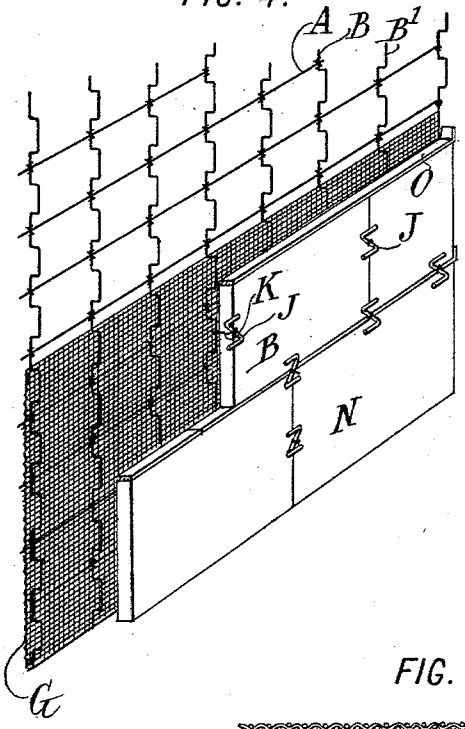


FIG. 8.

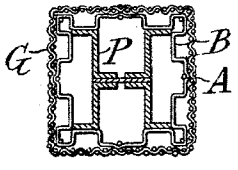


FIG. 9.

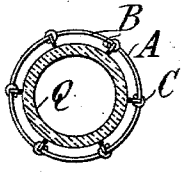
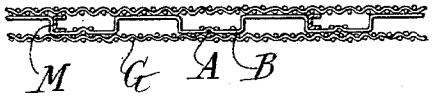


FIG. 7.



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No. 745,547. Patented December 1, 1903.

UNITED STATES PATENT OFFICE.

WILLIAM N. WIGHT, OF NEW YORK, N. Y.

PARTITION AND FURRING.

SPECIFICATION forming part of Letters Patent No. 745,547, dated December 1, 1903.

Application filed February 12, 1903. Serial No. 143,040. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM N. WIGHT, a citizen of the United States, residing in the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Partitions and Furring, of which the following is a specification.

My invention aims to provide an improved furring in the form of a fabric which shall be light and strong and shall be adapted for easy application to walls, partitions, or other supporting structures and which may be very cheaply made and to provide certain convenient applications of such furring or of any similar or suitable furring in the erection of light partitions.

My invention provides various other advantages specified in detail hereinafter.

The accompanying drawings illustrate embodiments of my invention.

Figure 1 is a face view of a wire-fabric furring. Fig. 2 is a vertical section showing the employment of the same in connection with a brick wall and wire lathing. Fig. 3 is a similar section showing the use of the furring in connection with plaster-boards. Fig. 4 is a perspective view showing in course of erection a partition embodying my invention. Fig. 5 is a vertical section of Fig. 4. Fig. 6 is a similar section, plaster-board being substituted for wire lathing. Fig. 7 is a horizontal section of another style of partition. Figs. 8 and 9 are horizontal sections showing the application of the furring to columns. Fig. 10 is a face view of another form of the invention.

My improved furring consists of a fabric formed with a base portion adapted for attachment to a supporting structure and a face portion lying in a plane offset from the base portion and adapted to carry a support for the finishing coat of plaster—such, for example, as the ordinary wire or sheet-metal lathing or thin plaster-boards. The strands of the fabric are spaced at wide intervals apart, so as to make it quite distinct from the ordinary wire or sheet-metal lathing, with meshes so fine as to hold the coat of plaster applied directly thereon, my fabric being designed merely to secure the necessary strength and stiffness to support the weight of the lathing and plaster and without any superfluous material. For example, I have shown a fabric with meshes about eight inches square, though the invention of course is not limited by any absolute dimensions.

The fabric which I preferably employ for the making of my improved furring comprises two sets of wires, which I distinguish as longitudinal and transverse, extending at right angles to each other and locked together at their crossing-points. The particular number of sets of wires, however, and their relative directions and attachment or lack of attachment to each other are not material to the invention except as defined in the claims.

A feature of improvement consists in forming the furring with a set of wires lying in a single plane and another and distinct set of wires offset from such plane for attachment to the supporting structure. Preferably the wires of the first set run in parallel directions and are straight, and preferably the offset wires are arranged with their offset portions between each pair of the straight wires.

My improved furring is especially adapted, as stated, for the forming of light partitions, being itself light and easily erected and having considerable stiffness when in place. Such a partition may comprise a main support of any desired thickness, upon which the furring is attached, the furring in turn carrying the lathing or other support for plaster and this support carrying in turn the finishing layer of plaster. The main support, for example, may comprise a series of blocks laid up with or without cement, giving the necessary support to the attached furring and to the lathing and plaster carried thereby.

Referring to the particular embodiments illustrated, Fig. 1 shows a corner of a fabric furring comprising longitudinal wires A and transverse wires B, which at the crossing-points are bent around the straight longitudinal wires in the manner indicated in the sectional views and locked thereto—as, for example, by a binding-wire C passing around the two wires at the crossing-points. Preferably the wires A and B are connected to the selvage-wires D by bending the ends of the internal wires around the straight selvage-

wire, as shown at E. Each one of the set of wires B is provided with an offset portion B′, preferably made of greater length than the ordinary distance between brick-joints, so as when set up in the position of Fig. 2 or Fig. 3 the portion B′ will always cross at least one joint of the brickwork and may be attached to the brickwork by means of a staple F driven into the joint. The portions B′, as indicated, all lie in a single plane parallel with the plane of the remaining portion of the fabric and offset therefrom any suitable distance—say, for example, about one inch. It is preferably the transverse wires B which are offset, as shown, because these wires are bent around the longitudinal wires and the selvage-wire and by reason of this fact more effectively resist any pressure tending to collapse the fabric by turning the offset wires in a horizontal plane. If the offset wires were without such bends at their points of connection with the other wires, there would be nothing to resist a horizontal pressure except the frictional engagement of the offset portion of the wire with the staples and brickwork or with the other set of wires at the crossing-points. The wire lathing G with fine meshes or the thin blocks H of plaster-board or the like are wired or otherwise attached to the face portion of the furring. The blocks H, for example, may be wired by means of clamps J and wire ties K, passing around the furring and the clamp and having its ends twisted to draw the two together and hold the blocks H against the furring and in alinement with each other. The clamps J are preferably of the **Z** shape shown in Fig. 4. Upon the plaster-support (lathing or plaster-board) carried upon the furring the usual finishing coat or layer of plaster L may be applied.

It will be seen that this construction provides for a very slight metallic communication between the facing and the supporting portions of the wall, thus giving a good heat insulation. The offset portions B′ provide a wide flat bearing against the main support, and the face portion provides wires at very frequent intervals for connection of the facing material of the wall. The wires are preferably galvanized to prevent rusting. The attachment of the furring to the main support is very easy, and therefore very rapid. There are no surplus wires in excess of those actually needed, such as would lessen the insulation and add to the weight and difficulty of erecting and also to the expense. The fewest possible number of wires is used, and these are firmly fastened at their crossing-points to prevent distortion of the meshes. The fact that all the wires B of one set symmetrically arranged are bent out of the original plane of the fabric and that all the wires A of another symmetrically-arranged set are unaltered, remaining in the plane of the original fabric, greatly facilitates the manufacture of the furring. These features might obviously be present with a greater number of sets of wires than those shown and with the wires arranged and spaced differently. In order to better enable the furring to take the vertical load of the plaster carried thereby, I prefer to arrange the offset wires in a substantially vertical direction, as shown in Figs. 2 to 6, which better enables them to resist the strain.

My improved furring may be applied in a variety of ways to the construction of partitions and greatly facilitates and cheapens the construction thereof, and especially of light partitions. For example, in Fig. 7 I show the same in combination with wire lathing on each side upon which the usual finishing layer of plaster is to be applied. In this construction preferably the fabric is arranged with the straight wires A in the vertical direction and the bent wires B in the horizontal direction, and preferably, also, the furring is attached to uprights, such as channels M, especially to stiffen it during erection and during the application of the plaster thereto. The lathing G may be wired thereto, as in Fig. 2, or otherwise attached, or a good light partition, Figs. 4, 5, and 6, may be formed of blocks N of plaster-board or the like laid up on edge without cement, but with bonding-strips O in the horizontal joints and clamped into alinement with each other by means of clamps J or the like, as described in detail in my Patent No. 668,366, of February 19, 1901, the ties K being attached on the inner side of the blocks N to the offset wires B of the furring. The opposite or face portion of the furring may carry the wire lathing G or another set of blocks N. Obviously in this construction the position of the blocks and of the wire lathing might be reversed, though I prefer the arrangement shown, for reasons previously stated. Fig. 6 shows a similar construction in which thinner plaster-boards H are applied on the opposite side of the furring from the supporting-blocks N.

My improved furring is obviously capable of application in a number of other structures besides those illustrated. Examples of other applications are shown in Figs. 8 and 9, where the furring is wrapped around a built-up column P or a cylindrical cast-iron column Q, the usual wire lathing (omitted from Fig. 9) being then applied to the furring. The furring may run in either direction, and I have shown it in Fig. 8 with the offset wires B horizontal, while the same wires in Fig. 9 are shown vertical.

I prefer to use high-carbon-steel drawn wires for my fabric and may make some of the wires—as, for for example, the selvage-wire—heavier than the others. Such a fabric locked at the joints is much superior to detached members. It can be made in continuous sheets of great length—of almost unlimited length, in fact—and in manufactur-

ing is made in lengths from three hundred to five hundred feet. It can therefore be used continuously over great lengths of wall without patching or splicing, and it can be cut when necessary without waste.

Instead of making the fabric from separate wires woven and locked together a metal fabric, perhaps not so cheap or good, but mechanically equivalent to that shown, may be made from sheet metal, such as that used in making sheet-metal lathing. For example, large meshes might be punched out, leaving the metal in the form of strands crossing each other and bent to form the offset portion just as the strands of wire may be bent. Fig. 10 shows such a sheet-metal fabric, the strands *a* being straight and the strands *b* being bent, as at *b'*, these parts being identical in function with the strands A and B and offset portions B' of the wire fabric shown in Fig. 1. In fact, the invention includes any suitable material made in the form of a continuous sheet of fabric and with meshes of such size as to leave only enough strands or solid material to safely support the load to which it is to be subjected.

Though I have described with great particularity of detail certain specific structures embodying my invention, yet it is to be understood that the invention is not limited to the specific embodiments shown. Various modifications thereof in the details and in the arrangement and manner of combination of the parts may be made by those skilled in the art without departure from the invention.

What I claim is—

1. A furring for the attachment of lathing or the like to a supporting structure and comprising alone a complete fabric made in a continuous sheet having large meshes (as distinguished from the fine meshes of lathing) and having a base portion and a face portion offset from each other, the base portion being adapted for attachment to a supporting structure and the face portion for carrying lathing or other support for plaster.

2. A furring for the attachment of lathing or the like to a supporting structure and comprising alone a complete fabric of metal formed with strands at wide intervals apart (as distinguished from the fine meshes of lathing,) said fabric being formed with a base portion and a face portion lying in planes offset from each other, the base portion being adapted for attachment to a supporting structure and the face portion for carrying a support for plaster.

3. A furring comprising a fabric of longitudinal and transverse wires arranged at wide intervals apart and locked to each other at their crossing-points, said fabric being formed with a base portion and a face portion lying in planes offset from each other, the base portion being adapted for attachment to a supporting structure and the face portion for carrying a support for plaster.

4. A furring comprising a fabric of straight longitudinal wires, transverse wires spacing said straight wires and bent around the same at the crossing-points, and binders binding said longitudinal and transverse wires together at their crossing-points, all said wires being arranged at wide intervals apart and said fabric being formed with a base portion and a face portion lying in planes offset from each other, the base portion being adapted for attachment to a supporting structure and the face portion for carrying a support for plaster.

5. A furring for the attachment of lathing or the like to a supporting structure and comprising alone a complete metal fabric containing a set of strands lying in a single plane and another set of strands offset for attachment to a supporting structure.

6. A furring for the attachment of lathing or the like to a supporting structure and comprising alone a complete metal fabric containing a set of strands running in parallel directions and lying in a single plane, and a second set of strands running transversely to said first set and offset for attachment to a supporting structure.

7. A furring for the attachment of lathing or the like to a supporting structure and comprising alone a complete metal fabric containing a set of substantially straight strands running in parallel directions, and a set of strands running transversely thereto and offset for attachment to a supporting structure.

8. A metal-fabric furring containing a set of substantially straight strands running in parallel direction, and a set of strands running transversely thereto and offset between each pair of straight strands for attachment to a supporting structure.

9. A wire-fabric furring containing a set of substantially straight wires, and a set of wires running transversely thereto and offset for attachment to a supporting structure, said transverse wires being bent around said straight wires.

10. A wire-fabric furring containing selvage-wires, and a set of wires running transversely thereto and offset for attachment to a supporting structure, said transverse wires being bent around said selvage-wires.

11. A wire-fabric furring containing a set of substantially straight wires and a set of wires running transversely thereto and offset for attachment to a supporting structure, said transverse wires being bent around said straight wires and locked thereto at the crossing-points.

12. A structure comprising in combination a main support, a furring comprising alone a complete continuous sheet of fabric attached thereto, a support for plaster in addition to said furring fabric and attached thereto, and a layer of plaster on said plaster-support.

13. A structure comprising in combination a main support, and a metal furring comprising alone a complete fabric attached

thereto, said fabric containing substantially vertical strands offset and attached to said main support.

14. In a partition in combination a furring comprising alone a complete continuous sheet of fabric, and in addition a plaster-support attached thereto.

15. In a partition in combination a series of blocks laid up without cement, and a furring in the form of a continuous sheet of fabric attached thereto.

16. In a partition in combination a series of blocks, a furring, and clamps holding said blocks in alinement and said furring attached thereto.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

WILLIAM N. WIGHT.

Witnesses:
DOMINGO A. USINA,
FRED WHITE.