

Wood fibres bonded together by
~~asphalt~~ cement {sil. pot
whiting

A. W. HERBERT.

LATHING MATERIAL.

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Fig. 1.

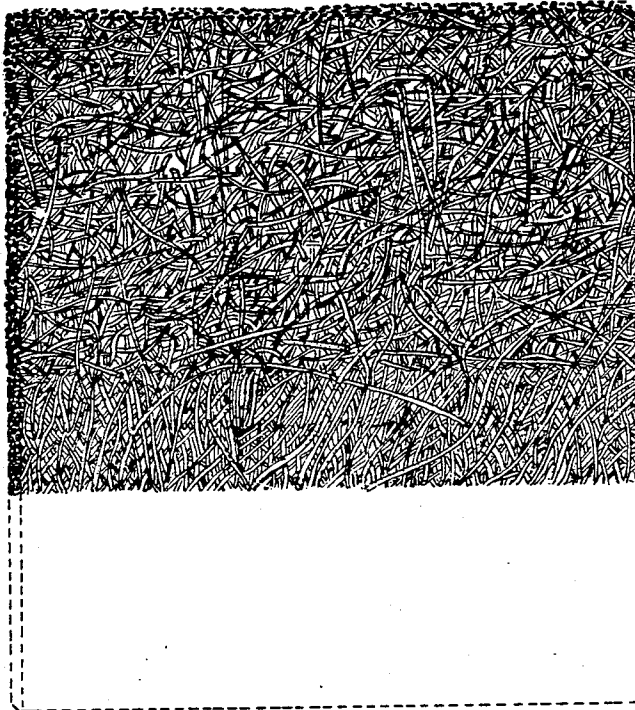


Fig. 2.



Fig. 3.



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UNITED STATES PATENT OFFICE.

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LATHING MATERIAL.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ARTHUR W. HERBERT, a citizen of the United States, residing at Youngstown, in the county of Mahoning and State of Ohio, have invented certain new and useful Improvements in Lathing Material, of which the following is a specification.

This invention relates to a new composite building material to be used chiefly as lathing in the construction of walls, floors, partitions and other structural parts.

A primary object of the invention is to provide a lathing of relatively inexpensive construction, fully responding to building requirements, and susceptible of being manufactured economically by simple mechanical processes. Also, to provide a product having the necessary stiffness and strength for use as lathing, though being of an exceedingly light construction, and easily handled and transported.

A further object of the invention is to provide an improved lathing structure which can be manufactured from cheap fibrous cuttings, as excelsior, and to consolidate such material with a fireproofing and bonding composition to produce a retacious matted body affording a very extensive and thorough plaster-key for the plaster or other cementitious material.

Another object of the invention is to make a new lathing material which inherently will firmly and evenly maintain its form, and contribute to the strength and stability of the building structure. Furthermore, to produce a lathing material not affected by the moisture from the cementitious material, nor by heat or cold, thereby obviating wall defects resulting from the use of materials which are affected by such forces.

With the above and other objects in view which will more readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination and arrangement of parts hereinafter more fully described, illustrated and claimed.

In the exemplified embodiment shown in the drawings,

Figure 1 is a perspective view of the new lathing material.

Fig. 2 is a cross-sectional view indicating, somewhat diagrammatically, the tangled formation of the retacious matted body forming the lathing.

Fig. 3 is a cross sectional view showing the matted lath-body enveloped and filled with a plaster coat, as in practise.

Similar reference characters designate corresponding parts throughout the several figures of the drawings.

The new lathing, of the present invention, differs primarily from other types and forms of lathing in the characteristic of presenting a retacious matted body, wherein apertures and interstitial spaces extend promiscuously through, and throughout the body, in every direction and plane with the result of providing a most extensive and effective keying area for the plaster or other cementitious material applied thereto. In addition to this characteristic of the matted body, preferably coarsely matted, its tangled and shredded formation lends itself to very thorough treatment within and without so that it can be rendered entirely fireproof and waterproof. At the same time, this treatment, to produce the fireproofing and waterproofing effect, also may be utilized to consolidate and cement the material together in sheet or slab form having the necessary requirements of lathing for building purposes.

A preferred and practical embodiment of the invention is made from thin wood cuttings, strands or shreds, such as found in the well known packing material excelsior, and, in fact, excelsior is especially adaptable for the body material of the new lathing, although it is to be understood that other fibrous materials, of equivalent form and nature, such as hemp or jute fibers, may be utilized for the same purpose.

As is well known, excelsior consists of a loosely and coarsely tangled mass of thin wood shreds or cuttings, and it is the purpose of the present invention to first have the body material of this kind and form. Then the same is subjected to treatment with

suitable chemicals which will render the product both fireproof and waterproof, as well as intimately cementing together the entire mass, and imparting stiffness and strength thereto without disturbing or filling up the extensive areas of keying apertures and interstitial spaces. Various chemicals and substances may be employed for this purpose, but it is preferable and desirable to use a chemical, or a combination of chemicals, that will chemically react with the organic acid in the fiber strands, to thereby convert the same into stone-like strands or shreds. In other words, a treatment obtaining that result would in effect artificially petrify the fibrous material, thus rendering the same of great utility in the production of a lath for general building purposes.

An example of the treatment to which the coarsely matted mass of fibrous material may be subjected would be to saturate the same with a cement composed of silicate of soda and whiting, which is calcium carbonate. It is a well known fact that when silicate of soda is treated with a dilute acid, insoluble silicic acid is formed, and so far as known a similar action takes place when materials such as excelsior are treated with the silicate of soda and calcium carbonate. The reaction involved is facilitated by the application of heat to the product to dry the same, and the result is the formation of a practically insoluble and fireproof compound, consisting in part of silicic acid and calcium acetate. However, I do not wish to confine myself, in carrying out the present invention, to the use of these particular chemicals since there are available for the same purpose other chemicals which will react with the organic acid in the fiber to produce artificial petrification and render the material both fireproof and waterproof. Also it will be noted that if found desirable the cement mixture can be readily combined with crushed quartz or other inert filling materials.

After the so-called petrifying treatment of the coarsely matted fibrous material, the same is subjected to pressure, by means of rolls or other instrumentalities, to compress the mass into sheet or slab form, thereby bringing the loosely entangled or interlaced fibers or shreds into closely and flatly contacting relation, and causing the excess of the fireproofing cement to distribute itself throughout the mass so that it not only acts as a cement or fastening for the fibers, but also gives strength and stiffness to the structure. Then the material is preferably dried by heat to facilitate and complete the chemical reaction involved and also to cause the cement and the treated fibers to thoroughly harden and set.

Sheets of lathing constructed in this man-

ner may be easily handled and transported and used in the same manner as any other form of lathing, at the same time preserving its fireproof and water-resistant characteristics, and firmly maintaining its form and shape after the cementitious material is applied thereto. Furthermore, the improved structure, as above stated, presents a most extensive and thorough keying area for the plaster, so that the latter is held much more effectively and in better form than with other kinds of lathing heretofore manufactured and marketed.

I claim:

1. A plaster-keying lathing sheet consisting of a retaceous matted body of shredded material, and a binder therefor.

2. A plaster keying lathing material in lath form consisting of a retaceous matted body of fibrous strands, and a cement for bonding said fibers together at their points of contact and also covering the individual fibers.

3. A plaster keying lathing material in lath form consisting of a retaceous matted body of artificially petrified fibrous material.

4. A plaster keying lathing material in lath form consisting of a retaceous matted body of artificially petrified wood fibers bonded together at their points of contact.

5. A plaster keying lathing material in lath form consisting of a retaceous matted body comprising a tangled mass of fibrous strands, and a cement for bonding the strands together at their points of contact.

6. A plaster keying lathing material in lath form consisting of a retaceous coarsely matted body of wood fibers providing a plaster keying surface, and a cement for bonding said fibers together at their points of contact.

7. A plaster keying lathing material in lath form consisting of a body of artificially petrified excelsior packed into sheet form to present a surface having a multiplicity of plaster keying openings.

8. A process of making a lathing material in lath form which consists in treating a loosely tangled mass of fibers with a cementitious material, and subsequently subjecting the mass to pressure forming a retaceous matted sheet with intercommunicating keying interstices.

9. A process of making a lathing material in lath form which consists in treating a loosely entangled mass of wood fibers to the action of a petrifying cement, and subjecting the mass so treated to pressure to provide a retaceous matted sheet with a multiplicity of intercommunicating keying interstices.

10. A process of making a lathing material in lath form which consists in treating a loosely entangled mass of wood fibers to the action of a petrifying cement in plastic

condition, then subjecting the mass while
wet to pressure forming a reticuous matted
sheet with intercommunicating keying in-
terstices, and subsequently drying the sheet
5 to permit the cement and treated fibers to
harden and set.

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

Witnesses:

H. E. WHITE,
O. DRAISER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."