Dec. 4, 1923. 1,476,078

W. M. JANPOLE

STRUCTURAL ELEMENT

Filed Oct. 23, 1920

Fig. 1.

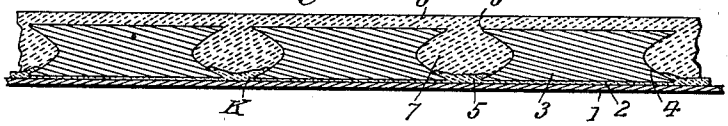


Fig. 1a.

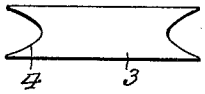


Fig. 2.

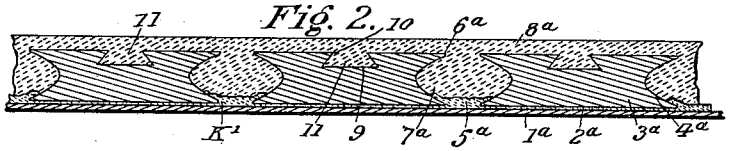


Fig. 2a.

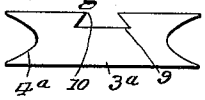


Fig. 3.

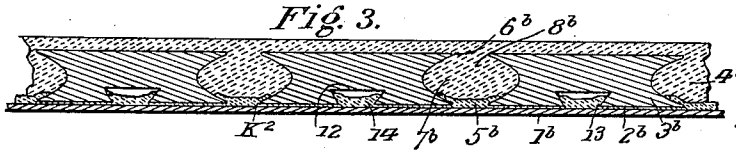


Fig. 3a.

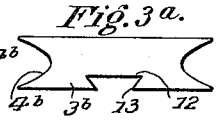


Fig. 4.

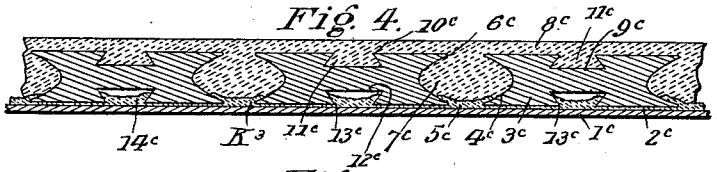


Fig. 4a.

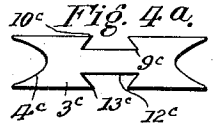


Fig. 5.

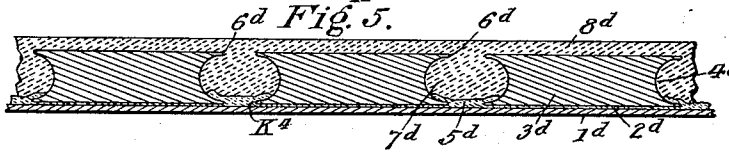


Fig. 5a.

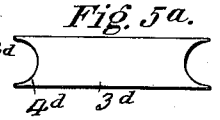


Fig. 6.

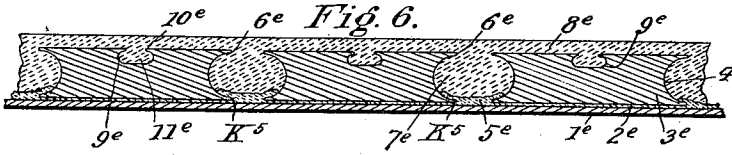


Fig. 6a.

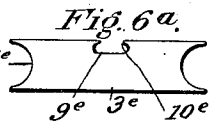


Fig. 7.

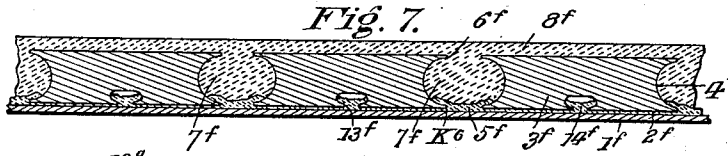


Fig. 7a.

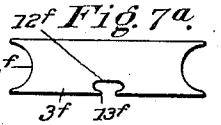


Fig. 8.

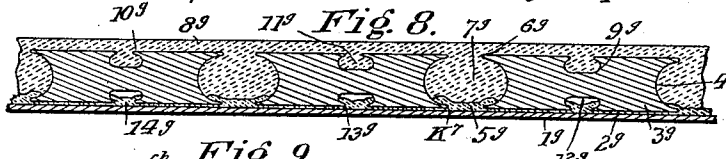


Fig. 8a.

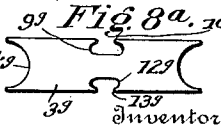
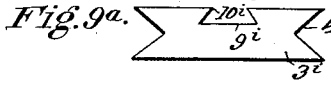


Fig. 9.



Fig. 9a.



Inventor

William M. Janpole.

Patented Dec. 4, 1923. 1,476,078

UNITED STATES PATENT OFFICE.

WILLIAM M. JANPOLE, OF NEW YORK, N. Y.

STRUCTURAL ELEMENT.

Application filed October 23, 1920. Serial No. 418,998.

To all whom it may concern:

Be it known that WILLIAM M. JANPOLE, a citizen of the United States, residing at New York, in the county of Manhattan and State of New York, has invented certain new and useful Improvements in Structural Elements, of which the following is a specification.

This invention relates to new and useful improvements in structural elements, and the primary object of the invention is to provide a new and improved lath in combination with other elements to provide new features heretofore unknown and unused in the art of construction material.

It is an express purpose of my invention to provide an improved method, the result of which will be an article of manufacture particularly applicable for use in building structures as a covering for walls, ceilings and the like and for other practical purposes and uses.

It is a further object of the invention to provide a most essential feature in structural material which is superior to any product of this character heretofore utilized for the same purpose and which will overcome the many difficulties experienced in the use of elements for which my improved article is a substitute.

Furthermore and more particularly it is an object of my invention to provide an improved wall covering in which laths, slats, strips or the like with my new features are anchored to the backing and particularly affording a means whereby plaster, cement, stucco, or other similar materials are most effectively secured to the covering.

It is a still further object of my invention combining the novel features of the lath, slats, strips or the like with other elements constituting a wall covering, to provide a sanitary, damp, vermin, sound proof, impervious to water, air-tight, heat and cold insulating and fire-resisting wall covering. The structural element so organized and produced is inexpensive and economic in manufacture as well as economic in its utilization, is of long life and great durability, convenient in handling and most practical in its application, in that it forms a firm and rigid construction.

In carrying out the objects of my invention, I employ a body of paper or other suitable material to which is applied on one surface a coating, in plastic form, of asphaltum, or some similar substance or other adhesive flexible suitable materials in a heated stage, to which latter in turn are applied a plurality of improved laths, slats, strips or the like, being disposed parallel and at a desired distance apart, the method of application being such as to cause a positive adhesion into the plastic coated form of asphaltum of any other suitable material utilized, and the application of pressure to the above mentioned laths, slats, strips or the like for the purpose of firmly pressing the same into the asphaltum or other material.

While I have stated that the paper is coated with a material or substance in a heated stage, I do not desire to limit myself to such, as there may be instances wherein a coating of material non-heated, yet flexible and adhesive in character, may be utilized for this same purpose.

In thus having the elements united as heretofore specified, a structural element is constituted which may be worked up into suitable shapes and forms for subsequent use and serves as elements of building wall construction, ceilings or the like or for any other purposes desired.

In the accompanying drawing, forming a part of the referred to specification and claims, and embodying my invention, combining in novelty an improved lath, slat, strip or the like, in combination with other elements, I have illustrated in—

Figure 1, a fragmentary transverse section through a structural element embodying the preferred form of my invention;

Fig. 1ª, an end elevation of a lath, slat, strip or the like, such as utilized in Fig. 1 before its application for use in connection with the structural element;

Fig. 2, a fragmentary transverse section through a structural element embodying a modified form of my invention;

Fig. 2a, an end elevation of a lath, slat, strip or the like, such as utilized in Fig. 2, before its application to use in connection with the structural element;

Fig. 3, a fragmentary transverse section through a structural element embodying a further modification of my invention;

Fig. 3a, an end elevation of a lath, slat, strip or the like, such as utilized in Fig. 3 before its application to use in connection with the structural element;

Fig. 4, a fragmentary transverse section through a structural element embodying a further modification of my invention;

Fig. 4a, an end elevation of a lath, slat, strip or the like, such as utilized in Fig. 4 before its application to use in connection with the structural element;

Fig. 5, a fragmentary transverse section through a structural element embodying a further modification of my invention;

Fig. 5a, an end elevation of a lath, slat, strip or the like, such as utilized in Fig. 5 bofore its application to use in connection with the structural element;

Fig. 6, a fragmentary transverse section through a structural element embodying a further modification of my invention;

Fig. 6a, an end elevation of a lath, slat, strip or the like, such as utilized in Fig. 6 before its application to use in connection with the structural element;

Fig. 7, a fragmentary transverse section through a structural element embodying a further modification of my invention;

Fig. 7a, an end elevation of a lath, slat, strip or the like, such as utilized in Fig. 7 before its application to use in connection with the structural element.

Fig. 8, a fragmentary transverse section through a structural element embodying a further modification of my invention;

Fig. 8a, an end elevation of a lath, slat, strip or the like, such as utilized in Fig. 8 before its application to use in connection with the structural element;

Fig. 9, a fragmentary transverse section through a structural element embodying a further modification of my invention;

Fig. 9a, an end elevation of a lath, slat, strip or the like embodying a further modification of my invention illustrated in Fig. 9, which is adapted for utilization in connection with a structural element such as shown in the previously referred to figures.

In describing the invention I shall refer to the drawing wherein similar reference characters designate corresponding parts throughout the several views and in which, 1 designates a body of a backing constructed of paper or any other suitable material, the one face of which is coated or has otherwise applied thereto a plastic form 2 of asphaltum or any other suitable material, or mixture of materials.

My improved method contemplates the production of a structural element utilizing such a backing for a covering as above described upon which is anchored laths, slats, strips or the like, and in carrying out this object a lath, slat, strip or the like 3 is provided, the side edges of which are concavely grooved for the longitudinal length thereof. These grooves may be said to be substantially elliptical in cross-section and the upper and lower longitudinal edges of the lath, slat, strip or the like formed thereby are disposed in the same vertical plane, for the respective lengths thereof.

The plastic form 2 above referred to, is applied to the body of the backing preferably in a heated stage, and while in this stage a plurality of laths, slats, strips or the like 3 are pressed into the asphaltum 4, in a uniform, desired spaced-apart relation one to the other. In the spacing of these laths, slats, strips or the like on the backing, keyways K are formed between the lower edges of the adjacent laths, slats, strips or the like when the latter are pressed into said asphaltum. The forcing of this asphaltum through the keyways K permits such asphaltum to float upwardly and spread outwardly, finding a resting surface against the walls of the grooves 4. The settlement of the upwardly forced and spread asphaltum, which in the drawing is designated as 5, forms an anchorage between the laths, slats, strips or the like, and the backing, firmly securing the former in their respective positions to the latter.

As shown in Fig. 1, the space formed between two adjacent laths, slats, strips or the like is substantially elliptical in cross section, and that space between the upper edges of two adjacent laths, slats, strips or the like forms a keyway 6 to the elongated cavity 7 between the grooved walls 4. When the structural element thus formed is applied to use, it is adapted to be covered by plaster, lime, cement, stucco, or other similar materials which I have designated in the drawing by the numeral 8. When the plaster material is applied to the structural element, sufficient of the same is forced through the keyways 6 into the cavities 7 to fill the latter, thus affording a locking means for the body of the applied plaster.

In Figs. 2 and 2a, I have shown a modified form of the invention wherein, in addition to those novel features illustrated in Figs. 1 and 1a, I have provided the laths, slats, strips or the like in the upper faces thereof, as shown in the drawing, with dovetail grooves 9 extending the full length thereof. The formation of dovetail grooves provides key-

ways 10 whereby in the application of the plaster to this form of structural element an additional locking means is provided. The plaster, referred to as 8^a in this form, is forced through the keyway 10 and into the dovetail groove 9, binding against the sides of this groove and further locking the body of the plaster to the structural element, this locking portion of the plaster being designated in Fig. 2 as 11.

In Figs. 3 and 3^a, I have shown a further modified form illustrating an additional anchorage for securing the laths, slats, strips or the like to the backing. To this end, the lower face of each lath, slat, strip or the like is, as shown in Figs. 3 and 3^a, provided with a dovetail groove 12 which groove provides a keyway 13 for the admission therethrough of asphaltum, designated in the drawing as 14, which affords an additional anchorage for said laths, slats, strips or the like to the backing.

In Figs. 4 and 4^a, which is a still further modified form of my invention, I have combined the features of novelty illustrated in the three previously described forms of the invention, utilizing principally the upper and lower dovetail constructions 9^c and 12^c respectively. While I have not shown a heavier lath, slat, strip or the like construction, it may be advantageous for purposes of strength and rigidity in this form of the invention to construct such laths, slats, strips or the like of heavier material.

In Figs. 5 and 5^a, a further modification of the invention, I have shown the identical construction in Figs. 1 and 1^a, and all the features therein described, with the exception that the grooves 4^d as shown in these figures are semi-cylindrical in design.

In Figs. 6 and 6^a, I have shown a still further modified form of the invention identical in construction and principle as that illustrated in Figs. 2 and 2^a, with the exception that the grooves 4^e herein shown are semi-cylindrical in design and the locking grooves 9^e of the laths, slats, strips or the like are substantially elliptical in design.

Figs. 7 and 7^a show a further modification of the invention identical with that form of the invention illustrated in Figs. 3 and 3^a, involving the same principles thereof with the exception that the additional anchoring grooves 12^f are substantially cylindrical in design, as distinguished from the dovetail grooves 12 of Figs. 3 and 3^a, and the grooves 4^f are semi-cylindrical in design, as distinguished from the elliptical grooves 4^b, of said Figs. 3 and 3^a.

Figs. 8 and 8^a correspond identically in structure and principle with the form of the invention illustrated in Figs. 4 and 4^a, respectively, with the exception of the semi-cylindrical grooves 4^g and the substantially elliptical grooves 9^g and 12^g, respectively.

In Fig. 9, I have shown still another modified form of my invention wherein the laths, slats, strips or the like 3^h have the side edges thereof cut out in a V-shaped manner, providing V-shaped grooves the full length thereof. The keyway K^8 between the adjacent laths, slats, strips or the like afford the same means of anchorage as the keyway 6^h, and the same means of locking as described in connection with the other various forms of the invention.

In Fig. 9^a, I have shown a slightly modified form of the invention illustrated in Fig. 9, wherein a lath, slat, strip or the like 3^i has the upper face thereof provided with a dovetail groove 9^i which affords the keyway 10^i. While I have shown this dovetail groove in the upper face of the lath, slat, strip or the like to be used as a locking means for the body of the plaster, it will be well understood that it may serve as an anchorage for the laths, slats, strips or the like when the latter is disposed in the reverse position to the backing, to which it is adapted to be applied. On the other hand, it will be understood that a double dovetail groove construction may be utilized in connection with this form, as shown in Figs. 4 and 4^a of the drawing.

The variations in the forms of the invention are slight but the principles are common to all.

I am aware of the fact that other structural elements are known, wherein laths with beveled sides are secured to a backing, but my improved structural element contemplates advantages and accomplishments which cannot be attained by this former structure, and which will most efficiently carry out the numerous objects for which it is designed.

While I have described the elements best adapted to perform the functions set forth, it is obvious that various changes in the form, proportion and in the minor details of construction may be resorted to, within the scope of the appended claims, without departing from the spirit or sacrificing any of the principles of the invention.

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

1. A construction comprising a body portion, a strip having in each lateral side thereof a longitudinally extending groove, and a plastic adhesive material covering one side of said body portion, a portion of which enters the said grooves to hold the strip on the body portion.

2. A construction comprising a body portion, a strip having in each lateral side thereof a longitudinally extending groove, and a plastic adhesive material covering one side of said body portion, a portion of which enters the said grooves to hold the

strip on the body portion and a facing material also located in said grooves and extending over said strip.

3. In combination, a flexible sheet of material having a flexible adhesive coating covering one side thereof, a plurality of strips spaced apart from each other a predetermined distance and having in each side thereof a longitudinally extending groove; said strips being embedded in said adhesive material, which material extends above the bottom edges of said strips and into said grooves to firmly anchor said strips to said backing material.

In testimony whereof I affix my signature.

WILLIAM M. JANPOLE.