

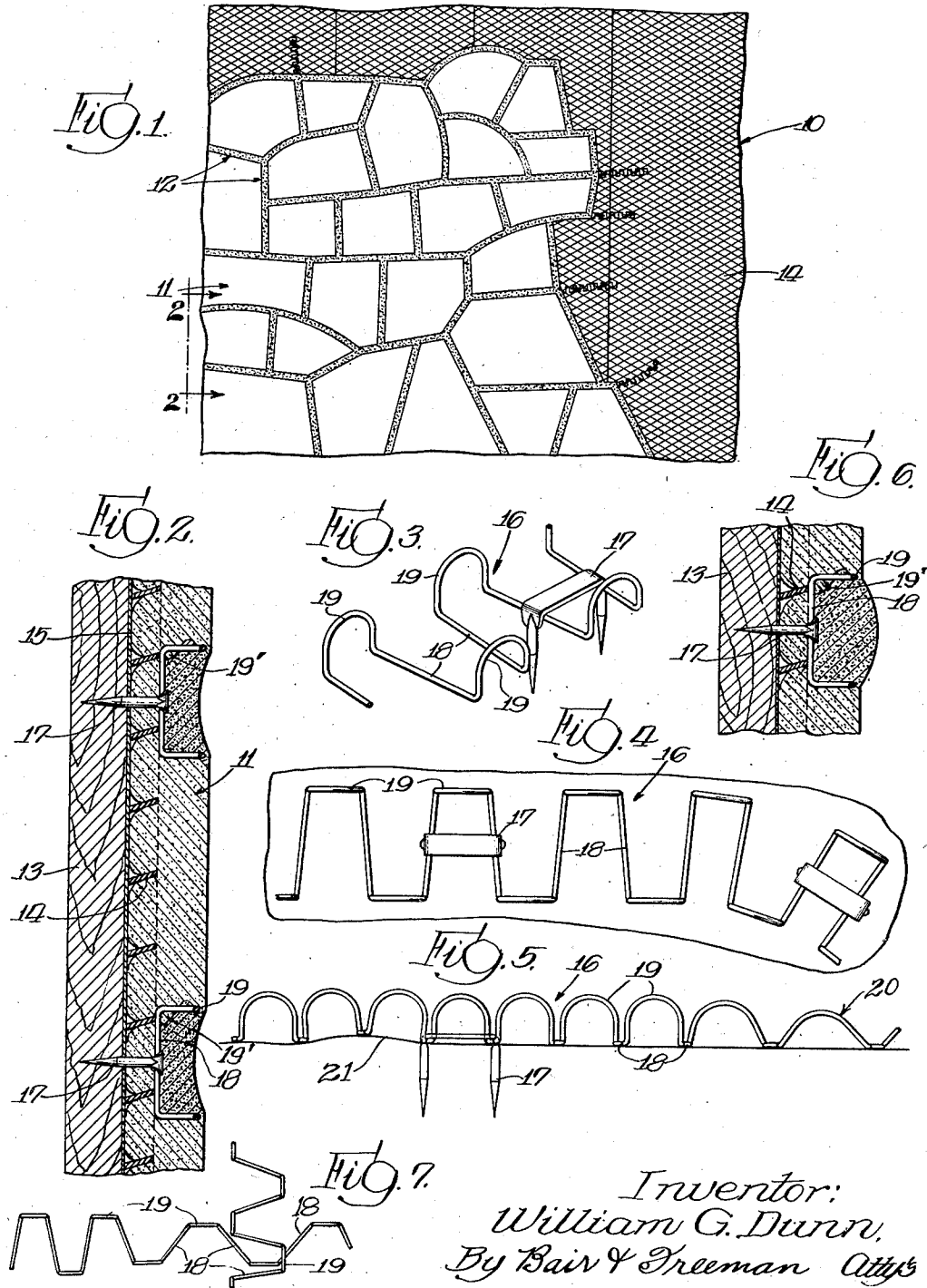
May 17, 1938.

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2,117,549

FLEXIBLE FORM FOR MASONRY STRUCTURES

Filed Jan. 26, 1933



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UNITED STATES PATENT OFFICE

2,117,549

FLEXIBLE FORM FOR MASONRY STRUCTURES

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Application January 26, 1938, Serial No. 187,013

16 Claims. (Cl. 72—17)

My invention relates to masonry structures and rather in particular to a form used as a guide in their erection. Among the objects of my invention is the provision of a dividing strip used to form patterns in a masonry structure.

Another object is the provision of a flexible dividing strip for forming patterns in a masonry structure which may be applied to surfaces suitable for the application of a mortarlike material which surfaces may not in themselves be smooth or which may be inclined or curved to conform with any of a variety of architectural subjects.

Another object is the provision of a pliant dividing strip applicable to a surface to which a mortarlike material may be applied which can be bent and turned in order to form individual separated patterns on the surface into which the mortarlike material may be deposited so as to complete part or all of the patterns before the insertion of a similar material into the joints separating those patterns.

Another object of my invention is the provision of a flexible dividing strip for masonry structures which can be bent and curved to divide a plaster base or similar surface into a multiplicity of separated patterns thereby to provide sufficient expansion joints for the surface so that no cracking will occur in the plastic material after it has been applied.

Still another object is the provision of an accordion-like plaited form for a masonry or the like structure having opposite sides extending in parallel planes suitable as a guide for the edge of a mortar material applied adjacent thereto and also as a gauge or screed for determining the depth of said material.

A further object is the provision of a flexible form for a masonrylike structure which acts as a guide for the edge and as a screed or gauge for the depth of a mortarlike material, which by reason of its flexible structure can be stretched or contracted so as to vary the gauge height and consequently the thickness of the material applied thereto and which also by virtue of said stretching or contracting, is adapted to narrow or widen a joint formed between the sides.

Another object is the provision of a combined flexible edge and joint forming strip for a masonrylike structure wherein the sides are of an open work design permitting a plastic material applied against it to flow and project through portions of the sides in order to be keyed to said form thereby to provide not only a key for the plastic material itself, but also an additional

key for other plastic material inserted within the joint formed by said strip.

Another object is to provide a reinforcing strip for a masonrylike structure which can be applied over a plaster base such as metal or wood lath or the like before the application of plaster in order to bind and weave together the entire mass and to supply at the same time a form for dividing the area into patterns separated by joints and adapted to be filled with plaster.

A further object is the provision of a flexible form for a masonrylike structure constructed of a single strand of wire plaited for flexibility and bent in the form of a channel which can be applied to a plaster or similar base in a curved design or cut and pieced to form a variety of patterns on said base for the reception of any of a variety of types of plastic material which might be applied thereto and allowed to harden.

A still further object is the provision of a flexible metal form of plaited construction which can be stretched and bent in such a manner that one strip may be attached to a surface in a position crossing another similar strip without lifting the sides of either above said surface, said sides also being provided entirely with rounded edges so that no sharp points will appear near the surface of a character which would be apt to catch in the usual trowel or tool used to apply plastic material thereby damaging the tool and making the production of a smooth finished job extremely difficult.

With these and other objects in view, my invention consists in the construction, arrangement and combination of the various parts of my device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims, and illustrated in the accompanying drawing, in which:

Figure 1 is a front elevation of a section of wall drawn to a reduced scale showing flexible strips attached thereto in patterns.

Figure 2 is a sectional view of the wall on the lines 2—2 of Figure 1.

Figure 3 is a perspective view of a portion of the flexible form.

Figure 4 is a top view of a portion of the flexible form.

Figure 5 is a modified side view of the form.

Figure 6 is a sectional view of a finished wall showing a particular type of joint and

Figure 7 is a diagrammatic representation of form strips crossing one another.

It has long been the practice in building structures, particularly when a stone effect is desired,

to dispense with a complete stone masonry job by building instead a brick, concrete or other type of wall and then facing or veneering the backing so formed with thin slabs of stones separated by pointed joints in order to give the effect of a stone masonry job.

Structures of this type, while efficient and attractive to the eye, have a drawback in being expensive to build when used with certain types of architecture and therefore a simpler, less expensive construction has been sought which at the same time is equally attractive.

The invention herein disclosed provides a means of supplying an attractive stone-like facing to a backing which may be formed of any sort of a plaster base upon which a mortar-like material may be hung. Although the description is applied specifically to a masonry structure, it is contemplated that other plastic material such as asphalt might be used or even in some cases, hard material of the nature of linoleum, which can be cut and formed for insertion in the patterns. It is possible furthermore, to use the strip to define a straight joint between squared hard tile materials where the dimensions of the tile are already established.

In the particular embodiment chosen to illustrate an application of my device there is shown a plaster base generally indicated by the numeral 10 to which is applied a plaster or mortar-like substance 11 containing colored stones, quartz or merely coloring matter, in the form of patterns separated by the joints 12. The plaster base is composed of wood furring strips 13 to which are tacked sheets of metal lath 14 with preferably some form of building material such as tarred paper 15 therebetween.

The flexible form itself, generally indicated by the numeral 16, is shown fastened to the furring strips by the staples 17 over the metal lath in order to assist in the formation of the joints 12 shown in Figure 1. The flexible strip is constructed of a single strand of loosely plaited wire, the central portion of the plaits forming a substantially flat base 18 for the strip and the rounded corners 19 at each end of the plaits being bent upward at approximately right angles to the base forming for the strip opposed parallel sides. The plaited effect characteristic of the strip resembles in a manner the plaits of an accordion in that each opposite edge is joined to the adjacent edge to provide extreme flexibility.

It will be noted that the flat base 18 formed by the central portions of the plaited wire is of a completely open construction with the portions thereof held in place only by the resiliency of the material forming it connected at the curved portions 19. It will likewise be apparent that the opposed parallel sides formed by the upturned rounded portions 19 are of an open construction comprising an extremely pliant and flexible structure which can be bent or curved in practically any direction as indicated by the curves and angles of the patterns shown in Figure 1. Due to the extremely pliant construction, a flexible strip of the sort disclosed can also be stretched to elongate it or contracted to shorten it, an action which may be utilized to vary the space between the opposed sides, narrowing it or widening it as the case may be. By stretching in another manner or, if preferred, by pressing down a flat board or other object upon the tops of the curved portions 19, the height of the sides of the strip can be reduced by almost any appreciable amount as indicated by the numeral 20 in Figure 5. In contrary

manner, by contracting the strip, the height of the curved side portions 19 can be increased a slight amount.

Although extremely simple in construction, the flexible strip when applied to a masonry structure, presents a remarkable variety of possibilities. The simplest type of application is to apply the strip in its normal form to a plaster base in the manner indicated in Figures 1, 2 and 6. When the strip has been so attached to the wall, the workman is able to apply mortar or mortar-like material to the patterns so formed by ordinary methods keying it to the metal lath in the sections bounded by the sides of the flexible forming strip. The patterns may be of different colors and it is possible, by reason of the fact that all patterns are isolated, one from another, to apply mortar to all of the patterns of one color first, then all the patterns of another color, it being of no consequence that the material comprising one pattern might dry out and set, before the workman has had the opportunity of applying the others. After all or any number of patterns have been filled, the channel-like space formed between the sides of the flexible strip can be wiped out and filled with gray mortar or grout in order to give the effect of a pointed joint. The joint may be either a raked joint such as shown in Figure 2 or a raised joint of the type shown in Figure 6 or in fact any type of joint such as is ordinarily used in masonry work.

During the application of either the material forming the patterns or that forming the joints, said material in its plastic state will flow and project under the curves 19 forming the sides of the strip due to its open construction. This has a beneficial effect in that by flowing under the curves of the strip the material will be keyed thereto and consequently to the surface. Since the arches comprising the curves 19 of the sides cause the material in its plastic state to extend in separated ribbons from one side of the curves toward the other, a roughened edge is produced which, as shown at the points 19 in Figures 2 and 6, provides an exceptionally fine keying medium for the material applied to the opposite sides or to the joints, each one therefore engaging with the other to securely anchor the mass and bind it in place. The joint may in this manner be keyed to the material within the pattern and, conversely, the pattern material may be keyed to the joint.

Another variation in the application of the flexible strip forming my device is the utilization of its stretching or contracting properties, in order to more closely simulate in some instances a laid stone surface or a stone veneer. To improve the illusion it is desirable to have the thickness of the joints vary slightly so that an otherwise objectionable uniformity of width giving the effect of a prefabricated job may be avoided. This variation in the width of the joints can be achieved by tacking a portion of the strip to the surface in its normal shape and then stretching an adjacent portion of the strip before tacking it down. The stretching narrows the distance between the sides as shown in Figure 7 so as to correspondingly contract the width of the joint. Conversely, when this portion has been tacked to the surface the next succeeding portion can be contracted so as to increase the distance between the sides to give the effect of a wider joint. A selective variation between the narrowest and widest joints are at the disposal of the craftsman on the job.

Then too, it is commonly known that stone veneer is not in all instances absolutely flat, cer-

tain types having a noticeable roughened texture. Since the sides of the flexible strip form to some extent a gauge, or as it is termed in the building trades, a screed for determining the thickness of application of the mortar forming the patterns, it becomes possible to vary the mortar thickness by flattening out portions of the strip so that at some points along one or more sides of a given pattern the depth of the mortar applied therein will be shallower than others, producing consequently a slightly warped surface in order to give the roughened texture desired.

Other means of using the strip in addition to the practice of actually changing the height of its sides for the production of a roughened texture are also available. One such means contemplates the provision of a ground coat on the metal lath roughened up more or less to the same degree desired upon the finished surface and allowed to set. The flexible metal strip can then be applied on top of the ground coat and since it is of such an extremely flexible character, it will assume the contour of the roughened ground coat indicated by the numeral 21 in Figure 5 without becoming kinked or unnecessarily distorted. The sides of the strip will then be extended to various heights above a plan surface and the joints formed therebetween will also be suitably variegated in order to produce a warped surface texture and a joining of a particularly attractive sort.

Another feature of unusual utility embodied in this device is evidenced by the fact that the flexible strips can be crossed one over the other to form straight joints without it being necessary to cut the strip at the corners, as for example where a tile effect might be desired. By reason of the extremely open construction of the plaited wire forming the strip, the plaits of one, at the point of the intersection can be stretched or contracted so as to interlace with the plaits of a strip laid across it, as shown in Figure 7. It is possible to have the base portions of each lie flat against the surface to which they are applied and consequently retain the curve 19 arched over the adjacent base section 18 to maintain elevations of the curves 19 at precisely the same height above the surface.

When, for example, squared hard tile of known dimensions are to be used, the flexible strips may be first secured to the base in the form of squared patterns of the proper size and then the tiles may be inserted and set in grout. Should a tile be slightly oversize, the sides of the strip could be bent inwardly far enough to make a perfect fit.

Some changes may be made in the construction and arrangement of the various parts of my device, without departing from the real spirit and purpose of my invention, and it is my intention to cover by my claims, any modified forms of structure, or use of mechanical equivalents, which may be reasonably included within their scope.

I claim as my invention:

1. In a structure of the character of a surfaced backing to which a plastic material is applied and allowed to harden, a guide comprising a flexible strip having a single strand of plaited wire providing a base for attachment to the surface and opposite flexible sides separated by an open channel formed from ends of the plaits bent at an angle to said base.

2. A form for the application of plastic material to a suitable bonding surface comprising a flexible strip attachable to said surface and adapted to be shaped into arbitrary individual

patterns for reception of a plastic surfacing material and providing between said patterns space for a joint.

3. A form for a masonry-like structure applicable to a variably curved architectural bonding surface comprising a substantially flat, pliant strip adapted to be curved in conformance with the surface and formed into arbitrary individual patterns for reception of a mortar-like material and providing between said patterns space for a filled joint.

4. A form for a masonry-like structure applicable to a partially warped bonding surface comprising a substantially flat flexible strip having a flexible base capable of being warped to lie against the warped portions of the surface and formed into arbitrary individual patterns for reception of a mortar-like material.

5. A form for a masonry-like structure attachable to a bonding surface comprising a relatively wide pliant strip having a substantially flat base attachable to the surface and upright open sides forming a continuous channel above the base adapted to be secured upon the surface to form isolated patterns of arbitrary shape for the reception of a mortar-like material, the sides of said strip being adapted to determine the edges of the patterns and to cause separation of the edges of adjacent patterns by said channel space forming thereby a continuous dividing joint to permit piecemeal erection of said structure.

6. An edge forming means for a masonry structure attachable to a surface receptive to the application of a mortar-like material comprising a relatively wide flexible strip having a substantially flat base attachable to the surface and upright open sides forming a continuous channel above the base adapted to be secured upon the surface to form isolated patterns of arbitrary shape for the reception of the mortar-like material, the sides of said strip being adapted to determine the edges of the patterns and to cause separation of the edges of adjacent patterns by the channel formed thereby, said edges being yieldable to permit expansion and contraction at the edges of the various patterns to minimize surface cracking.

7. A gauge for the erection of a masonry structure upon a suitable bonding surface comprising a flexible screed having a substantially flat base portion adapted to be secured to the surface and open side portions adapted to be applied to the surface so as to form patterns of arbitrary shape separated by the sides of the strip, said sides being of a height above the base suitable for determining the depth of a mortar-like material for filling said patterns and simultaneously determining the depth and width of a mortar-like joint between said patterns.

8. A variable gauge for the erection of a masonry structure upon a suitably prepared surface comprising an expandable and contractible flexible strip having open sides and a base of plaited construction adapted to be applied to the surface so as to form masonry patterns of arbitrary shape separated by the sides of the strip, said strip having portions of the plaited parts thereof extendible and retractable lengthwise to change the space between the sides and to change the height of said sides, thereby to form joints of varying width between patterns and to form pattern surfaces of varying depth in order to simulate the appearance of natural stone.

9. A variable screed for the erection of a masonry structure upon a suitably prepared surface

- comprising an expandible and contractible flexible strip having open sides and a base of plaited construction adapted to be secured to the surface so as to form patterns of arbitrary shape separated by the sides of the strip, said strip having portions of the plaited sides thereof compressible so as to reduce the height, thereby to reduce the depth of the screed at certain portions thereof to effect a wavy finish for the material in the patterns.
10. A variable gauge for the erection of a masonry structure upon a suitably prepared surface comprising a flexible strip of variable length having open sides and a base of plaited construction adapted to be secured to the surface so as to form patterns of arbitrary shape separated by the sides of the strip, said strip being extendible and retractible so as to vary its effective length thereby to change the distance between the sides so that the width of the joints may be adjusted to the needs of a particular installation.
11. A combined guide and key for a masonry structure suitable for use on a surface adapted to the application of a mortar-like material comprising a flexible member having a base attachable to the surface in a manner to form separated patterns for the reception of the mortar-like material and having members of open construction at each side of the base forming a channel therebetween and guides for the edges of the patterns, said open construction being adapted to permit the mortar-like material to project therebetween forming a key to retain said material in place.
12. A combined screed and key for a masonry structure suitable for use on a surface adapted to the application of a mortar-like material comprising a flexible member having a base attachable to the surface in a manner to form separated patterns for the reception of the mortar-like material and having members of open construction at each side of the base forming a channel therebetween and guides for the edges of the patterns, said open construction being adapted to permit said mortar-like material to project therebetween and to key itself thereto, said channel being adapted to the reception of a mortar-like material forming a joint keyed similarly to the sides by projecting into unoccupied portions of said open construction and keyed simultaneously to the projecting edges of the pattern forming material.
13. A combined guide and reinforcement for a masonry structure suitable for installation on a surface provided with a mortar base of the nature of metal lath or the like comprising a flexible strip having one side adapted to be attached through the mortar base to the underlying surface before application of mortar to supply additional reinforcing by weaving together portions of said mortar base and the applied mortar, said strip having other sides forming a channel therebetween defining outside edges for applications of one type of mortar and inside edges for applications of another type of mortar.
14. A guide for use on a structure of the character of a surfaced backing to which plastic material is applied and allowed to harden comprising a flexible strip of plaited ductile material forming a base wherein the ends of the plaits are rounded and bent at an angle to the base so as to provide sides extending outward from the surface to which the strip is applied, said edges and corners being rounded to prevent interference or injury to the tools used to apply the plastic material.
15. A guide for use on a structure of the character of a surfaced backing to which a plastic material is applied and allowed to harden including a flexible strip for the plastic material comprising a plaited strand of ductile material wherein plaited portions thereof forming a base are merged progressively with plaited portions forming sides of uniform height providing thereby an open construction such that one flexible strip may be applied across another of said strips without changing the uniform height of the sides of either above said surface.
16. A flexible wire forming strip comprising a single wire folded into an accordion-like plait and bent at the ends of the plaits so that central portions of the plaits assume the form of a continuous flat base and alternate ends assume the form of upwardly curved arches comprising parallel walls at each side of the base.

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