

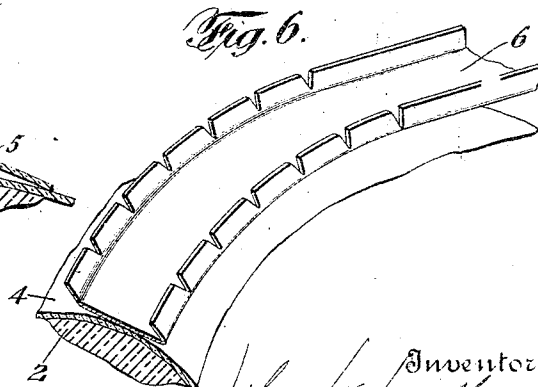
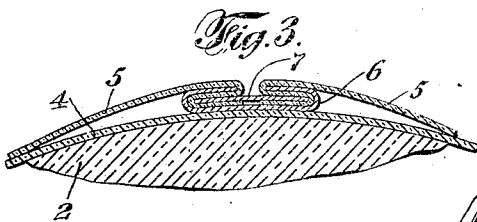
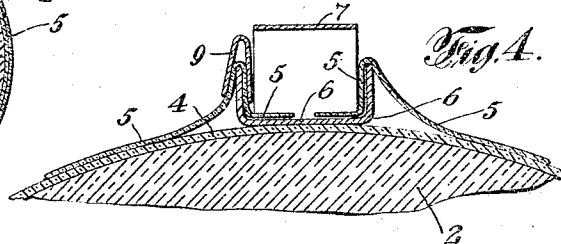
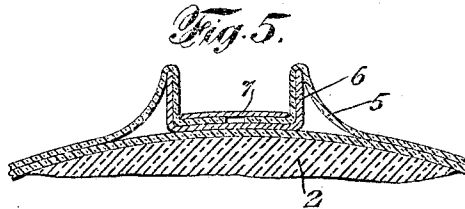
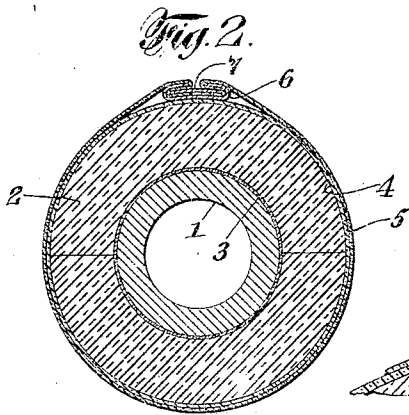
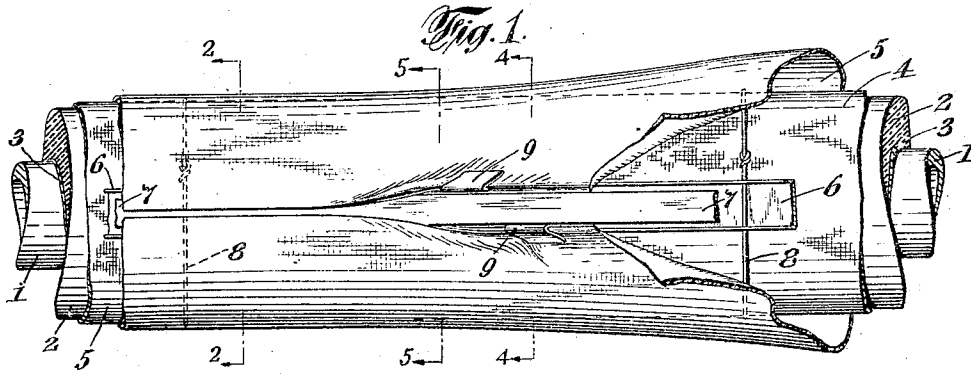
J. W. WALLACE.

MEANS AND METHOD FOR UNITING THE MARGINS OF FLEXIBLE MATERIALS.

APPLICATION FILED JULY 20, 1918.

1,297,047.

Patented Mar. 11, 1919.



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UNITED STATES PATENT OFFICE.

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MEANS AND METHOD FOR UNITING THE MARGINS OF FLEXIBLE MATERIALS.

1,297,047.

Specification of Letters Patent.

Patented Mar. 11, 1919.

Application filed July 20, 1918. Serial No. 245,808.

To all whom it may concern:

Be it known that I, JOHN W. WALLACE, a citizen of the United States, residing at Rutherford, in the county of Bergen and State of New Jersey, have invented certain new and useful Improvements in Means and Methods for Uniting the Margins of Flexible Materials, of which the following is a specification, reference being had therein to the accompanying drawings, forming part thereof.

My invention relates to means for uniting or securing together the opposed or meeting marginal edge portions of flexible material such as canvas or other fabric or the like forming an outer covering, such for example, and more particularly, the outer canvas covering commonly employed around the heat insulating jackets of steam pipes and the like. Heretofore the opposed marginal edges of such flexible outer covering have commonly been sewed together by means of an ordinary needle and string. This sewing operation consumes considerable time, and it is an important object of my present invention to effect a large economy both in the amount of time and of labor required to apply the canvas or similar outer covering. Other objects of my invention are inexpensiveness of the fastening device employed and security in the fastening produced thereby. Other objects and advantages of my invention will hereinafter appear.

My invention includes a channel strip for receiving the marginal edges of the flexible covering material in the channel formed thereby, and a locking strip adapted to lie upon such marginal edges in the channel of the channel strip, the flanges of the latter being bent down upon such marginal edges and locking strip for securely gripping and locking said marginal edges in place around the opposite edges of the locking strip and between the bottom of the channel formed by the channel strip and the turned over flanges thereof. My invention also includes the method involved.

I shall now describe the uniting means embodying my invention illustrated in the accompanying drawings and shall thereafter point out my invention in claims.

Figure 1 is a plan view illustrating the application of the uniting means of my invention to the insulating covering of a pipe, the work being completed as shown at the

left of this figure and uncomplete as shown at the right.

Fig. 2 is a somewhat enlarged transverse section on a vertical plane indicated by the line 2—2 of Fig. 1 as viewed from the right, and at the top shows the uniting means in place.

Fig. 3 is a similar view further enlarged and with parts omitted.

Fig. 4 is an enlarged partial transverse section similar to Fig. 3 on a vertical plane indicated by the line 4—4 of Fig. 1 as viewed from the right, and illustrates an uncomplete stage in the application of the uniting means or fastening device of my invention, in which the locking strip 7 projects outward at an angle.

Fig. 5 is a similar view indicated by the line 5—5 of Fig. 1, and represents a succeeding but still uncomplete stage in the application of the fastening device or uniting means, the complete application of which is illustrated at the left in Fig. 1 and in Figs. 2 and 3.

Fig. 6 is a perspective view illustrating how the fastening means of my invention is applied in turning corners.

In the accompanying drawings a pipe 1, which may be a steam pipe, is shown as provided with a usual divided or two-part heat insulating jacket or covering 2 which may be of asbestos, and which is shown as having formed therewith a usual lining 3 of suitable material, such as asbestos paper. At the outside of the two-part jacket or divided covering 2, there is shown a usual layer or wrapping 4 which is commonly of paper or of thin cloth having its edges overlapped and pasted down.

An outer covering 5 of canvas is applied over the thin layer 4, and the opposed marginal edges of this outer canvas covering 5 must be securely united or fastened together. Heretofore commonly the edges of the outer canvas covering, such as 5, have been turned in and the opposed folded meeting portions have then been united or fastened together by means of stitching applied with an ordinary needle and string.

According to my invention a channel strip 6 is provided having a flat bottom and lateral flanges upstanding therefrom and shown as projecting at right angles to the bottom, and a locking strip 7 is cooperative with the channel strip. The channel strip 6 is formed of suitable bendable material,

such as sheet metal, and the locking strip 7 may be formed for similar sheet metal, although the latter could be formed of other suitable material, such for example, as fiber. However, I prefer to form both the channel strip 6 and the locking strip 7 from suitable strips or ribbons of sheet metal, and I have found that the metal strips which heretofore have been commonly employed for the making of circular holding bands, for application around the heat insulation at the outside of a canvas covering such as 5, to be suitable for my purpose. The locking strip 7 may be somewhat thinner material than the channel strip 6, as shown in the drawings more particularly in Figs. 4 and 5.

The channel strip 6 is laid longitudinally of the pipe 1 over the inner wrapping 4, or along whatever surface is to be covered, and if desired or found more convenient in any particular instance, this channel strip 6 may be preliminarily retained in place by any suitable means, such for example, as by means of tie wires 8 passing around the pipe 1 at the outside of the wrapping 4 and passing through the base of the up-standing flanges of the channel strip 6, in which holes may be readily punched by means of an awl. Starting with the work at one end of the pipe 1 or other object to which the outer covering 5 is to be applied, shown as the left end in Fig. 1, and proceeding longitudinally along the channel strip 6 and marginal edges of the canvas covering 5, the opposed edges of the canvas covering 5 are progressively laid over the upstanding flanges of the channel strip 6, as is shown in Fig. 4 and at the corresponding plane in Fig. 1, with the opposed marginal edges of this covering 5 disposed upon the flat bottom of the channel formed by the channel strip 6. Preferably the marginal edges of the covering 5 are preliminarily secured in place upon the projecting edges of the channel strip 6 by any convenient means, and I have found that this may be readily accomplished by means of small V-shaped sheet metal clips 9 forming clamps which may be pressed over the upstanding flanges of the channel strip 6 for holding the marginal edges of the canvas covering 5 in place thereon preliminarily, as shown in Figs. 1 and 4.

Starting again at the end where the work begins,—which would be at the left in Fig. 1, and proceeding longitudinally in the same direction as before along the channel strip 6 and locking strip 7,—the locking strip 7 is progressively pushed down into the channel formed by the channel strip 6 between its upstanding flanges and against or upon the opposed marginal edges of the canvas covering 5, from the outer projecting position of the locking strip 7 shown in Fig. 4 to the position thereof shown in Fig. 5. The locking strip 7 is only slightly narrower than

the channel space provided between the upstanding flanges of the channel strip 6, thereby to provide for the passage of the marginal edge portions of the canvas covering 5, as perhaps appears most clearly in Fig. 5 of the drawings. Next the projecting flanges of the channel strip 6 are preferably slightly bent inward and the holding clips or clamps 9 may then be removed and moved forward as the work progresses. Finally, proceeding longitudinally in the same direction again along the channel strip, the flanges of the channel strip 6 are turned over inward to a horizontal or flat position, around the edges of the locking strip 7 and folded interposed fabric, progressively as the work proceeds, and are hammered down flat and into firm contact and clamping relation with the reversely folded marginal edges of the outer covering 5, as appears in Figs. 2 and 3, and at the left in Fig. 1. This final operation draws the outer covering 5 tightly in place and firmly grips and locks its marginal edges, as will be readily understood.

It is to be noted, as is best shown in Fig. 3, that the marginal edge parts of the fabric 5 are clamped between the turned over flanges of the channel strips 6 and the outer side of the locking strip 7, and are also clamped between the inner sides of the locking strip 7 and the bottom of the channel formed by the channel strip 6. Furthermore, and of great importance, the fabric 5 is caused to make two sharp turns, one around the opposite edges of the locking strip 7, and the other around the intumed flanges of the channel strip 6, whereby slipping of the fabric 5 is rendered impossible. It is to be understood, of course, that the sheet metal forming the channel strip 6 is sufficiently rigid or unyielding to prevent the straightening out of the bent over clamping flanges, such material being sufficiently heavy to withstand the required strain.

For turning corners it is only necessary to notch the flanges of the channel strip 6, as clearly appears in Fig. 6 of the drawings. The channel strip 6 and locking strip 7 may be employed in sections or pieces of any convenient length, and I have found a length of about three feet for a section to be about right for convenient use. Lap joints may be readily formed between adjacent ends of the channel strip 6, and similarly with the locking strip 7, as will be readily understood by those versed in the art. The uniting means or fastening device of my invention may be applied very rapidly, resulting in a great saving of labor and consequent reduction in expense.

It is obvious that various modifications may be made in the construction shown in the drawings and above particularly described, and also in the method involved,

within the principle and scope of my invention.

I claim:

1. Uniting means for fabric or other simi-
 5 larly flexible material, such means compris-
 ing a channel strip having upstanding bend-
 able side flanges over which the marginal
 edges of the flexible material may be laid
 10 into the channel formed by the channel
 strip, and a locking strip adapted to be
 pushed into the channel between the up-
 standing flanges and against the marginal
 edges of the flexible material between the
 flanges which are adapted to be bent inward
 15 to a flat position to grip and securely hold
 the margins of the flexible material be-
 tween the channel strip and the locking
 strip.

2. Uniting means for fabric or other simi-
 20 larly flexible material, such means compris-
 ing a channel strip having its flanges turned
 over, a flat locking strip extending longi-
 tudinally within the channel strip and held
 in place by the turned over flanges of the
 25 channel strip, and opposed marginal edges
 of flexible material folded respectively over
 the intumed edges of the said flanges and
 also folded reversely over the opposite edges
 of the locking strip and extending at both
 30 sides of the locking strip and gripped be-

tween the locking strip and the channel strip
 and also gripped between the turned over
 flanges of the channel strip and the locking
 strip.

3. The method of uniting opposed mar- 35
 ginal edges of fabric or other flexible mate-
 rial which consists in laying down a chan-
 nel strip with its flanges projecting, in pro-
 ceeding longitudinally along the channel
 strip and marginal edges of the flexible ma- 40
 terial and progressively laying such opposed
 marginal edges of the flexible material over
 said flanges and into the channel formed
 by the channel strip, in again proceeding
 longitudinally in the same direction along 45
 the channel strip and along a locking strip
 and progressively pushing the locking strip
 between the projecting flanges and against
 such marginal edges in the channel formed
 by the channel strip between its flanges, 50
 and in then finally proceeding longitudi-
 nally in the same direction along the chan-
 nel strip containing the marginal edges and
 locking strip and progressively bending
 over the flanges of the channel strip upon 55
 said marginal edges and locking strip.

In testimony whereof, I have affixed my
 signature to this specification.

JOHN W. WALLACE.

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

Correction in Letters Patent No. 1,297,047.

It is hereby certified that in Letters Patent No. 1,297,047, granted March 11, 1919, upon the application of John W. Wallace, of Rutherford, New Jersey, for an improvement in "Means and Methods for Uniting the Margins of Flexible Materials," an error appears in the printed specification requiring correction as follows: Page 3, line 22, claim 2, strike out the word "flat"; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 15th day of April, A. D., 1919.

[SEAL.]

F. W. H. CLAY, :

Acting Commissioner of Patents.

Cl. 24—243.