Dec. 27, 1927. 1,653,989

A. H. COOPER

REPAIR PATCH

Filed May 4, 1927

Fig. 1.

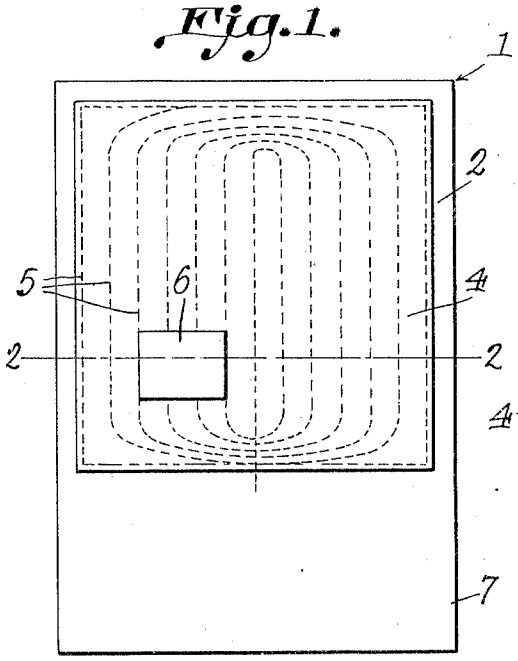


Fig. 3.

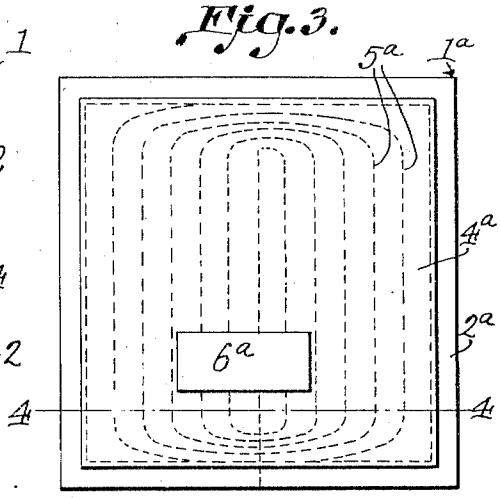


Fig. 4.



Fig. 2.

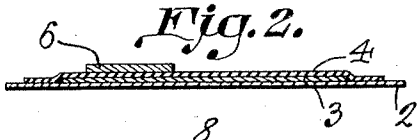


Fig. 5.

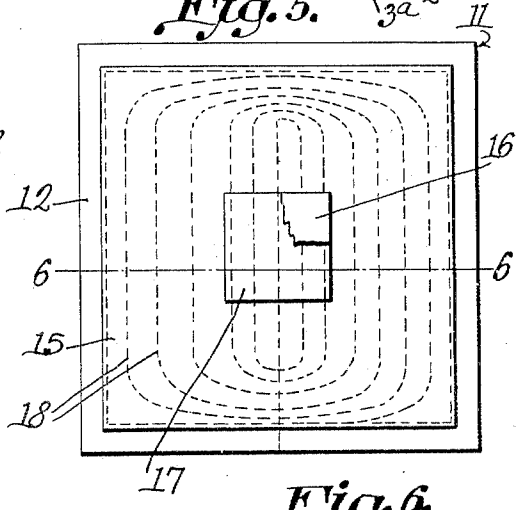


Fig. 7.

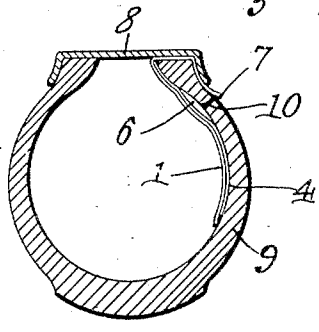


Fig. 8.

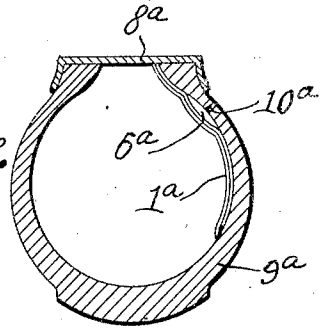
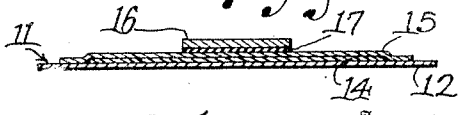


Fig. 6.



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UNITED STATES PATENT OFFICE.

ALVA HEYWOOD COOPER, OF ATLANTA, GEORGIA.

REPAIR PATCH.

Application filed May 4, 1927. Serial No. 188,751.

This invention aims to provide a novel repair patch for use in vehicle tires, novel means being provided whereby strength may be combined with adhesiveness.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type to which the invention appertains.

With the above and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed may be made within the scope of what is claimed, without departing from the spirit of the invention.

In the drawings:—

Figure 1 shows in plan, a repair patch constructed in accordance with the invention;

Figure 2 is a section on the line 2—2 of Figure 1;

Figure 3 is a plan showing a modified form of path;

Figure 4 is a section on the line 4—4 of Figure 3;

Figure 5 is a plan showing a modified form of patch, parts being broken away;

Figure 6 is a section on the line 6—6 of Figure 5;

Figure 7 is a cross sectional view illustrating how the device depicted in Figure 1 may be used; and

Figure 8 is a cross sectional view illustrating the use of the patch delineated in Figure 3.

Referring to Figure 1 and Figure 2, the patch comprises a raw cotton body. By "raw cotton" I mean a cotton canvas body which is not treated with rubber, oil, chemicals and the like. The cotton body 1 may be made in any desired way. In Figures 1 and 2, the cotton body 1 comprises a first layer 2 and a second layer 3 of less area than the first layer 2, a layer of rubberized fabric 4 being superposed on the second layer 3, the layer 4 being somewhat larger in area than the layer 3, so that the layer 4 engages the layer 2 about the periphery of the layer 3, as shown in Figure 2, although this detail is not insisted upon. The raw cotton layers 2 and 3, which compose the raw cotton body 1, and the layer 4 of rubberized fabric, are stitched together in any preferred way, as shown at 5. A piece of raw rubber 6, of any desired size, weight or form, is mounted adhesively on any part of the rubberized layer 4.

The raw cotton body 1 is a desirable element, in that it possesses great strength. The piece of raw rubber shown at 6 is highly desirable, also, in that it will stick to the tire casing, and enter broken places: but the raw rubber 6 does not have much tensile strength, as compared with a raw cotton body, like the part 1. Raw rubber, such as shown at 6, will not adhere to such a part as the raw cotton body 1, and this difficulty is overcome by interposing the layer 4 of rubberized fabric, the raw rubber 6 adhering readily to the fabric 4, and it being possible to stick the fabric 4 to the raw cotton body, a patch thus being provided which combines great strength with ability to fill and seal an opening in a tire casing.

In the form delineated in Figures 1 and 2, the first layer 2 of the cotton body 1 is considerably longer than the rubberized layer 4, so that the layer 2 has an extension 7 of considerable length, adapted to be engaged between a rim 8 and a casing 9, as in Figure 7, the piece of raw rubber 6 entering and filling the break 10 in the casing 9.

In Figures 3 and 4, parts hereinbefore described have been designated by numerals previously used, with the suffix "a". In this form of the invention, the extension 7 of Figure 1 is omitted. Figure 8 shows how the patch that appears in Figures 3 and 4 may be used in the repairing of a rupture in a tire casing.

In Figures 5 and 6, the raw cotton body is shown as comprising a first layer 12, a second layer 14 of smaller area than the layer 12, and a third layer 15 of greater area than the layer 14. The rubberized layer 17 is of the same size as the piece of raw gum rubber 16 which is adhesively mounted on the rubberized layer 17. The rubberized layer 17, and the layers 12, 14 and 15, which make up the raw cotton body 11, are stitched together, as shown at 18.

What is claimed is:—

1. In a device of the class described, a raw cotton body, a rubberized layer, stitch-

ing uniting the raw cotton body and the rubberized layer, and a piece of raw gum rubber adhesively mounted on the rubberized layer.

2. In a device of the class described, a raw cotton body, a rubberized layer, fastening means connecting the rubberized layer with the body, and a piece of raw gum rubber adhesively mounted on the rubberized layer.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature.

ALVA HEYWOOD COOPER.