S. KAUFMAN.

REINFORCING SEAMS OF WATERPROOF GARMENTS.

APPLICATION FILED DEC. 27, 1912.

1,073,858. Patented Sept. 23, 1913

Fig. 1.

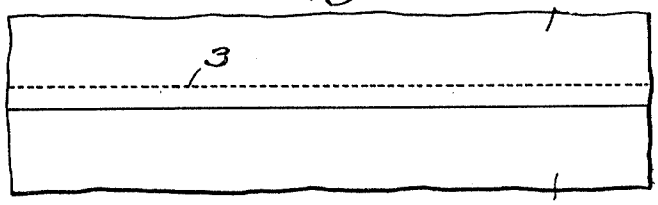


Fig. 2.

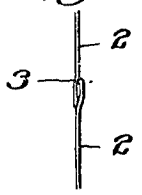


Fig. 3.

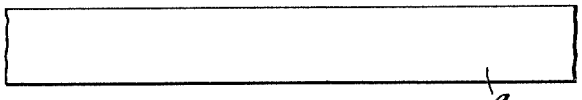


Fig. 4.

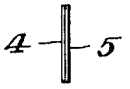


Fig. 5.

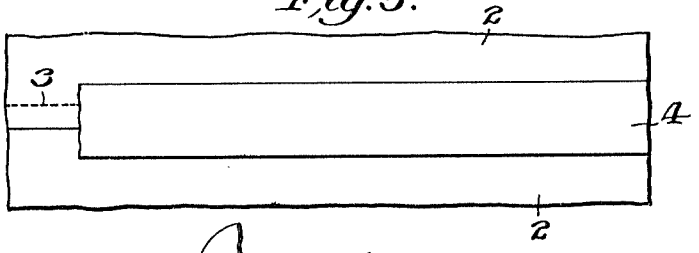


Fig. 6.

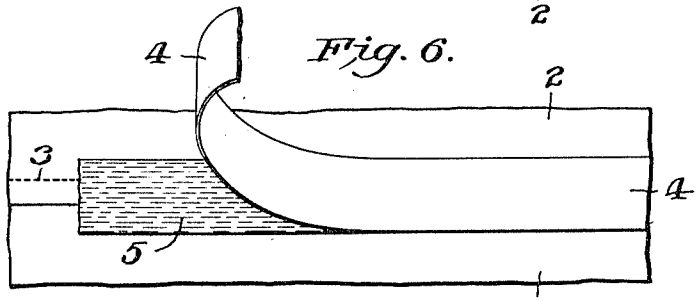


Fig. 7.

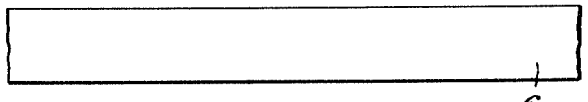


Fig. 8.

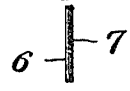
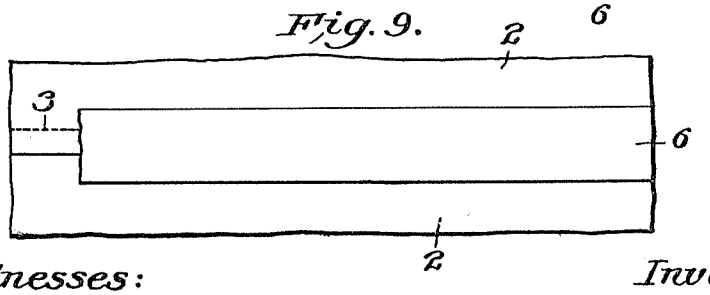


Fig. 9.



Witnesses:

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UNITED STATES PATENT OFFICE.

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REINFORCING SEAMS OF WATERPROOF GARMENTS.

1,073,858. Specification of Letters Patent. Patented Sept. 23, 1913.

Application filed December 27, 1912. Serial No. 738,805.

To all whom it may concern:

Be it known that I, SIMON KAUFMAN, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Reinforcing Seams of Waterproof Garments, of which the following is a specification.

This invention relates to seams for waterproof garments.

The object of the invention is to provide a novel process of applying reinforcing strips to waterproof garment seams whereby the reinforcing strips are caused to adhere more tenaciously than heretofore to the body of the garment in which the seam is formed, thereby rendering the reinforcing strips less liable than heretofore of separating from the body of the garment, it being well known to those skilled in the art to which my invention relates that manufacturers of waterproof garments experience great difficulty in applying the reinforcing strips in a satisfactory manner. With this object in view my invention will be hereinafter fully described and claimed.

In the accompanying drawings, illustrating my invention: Figure 1, is a face view of two pieces of waterproof fabric united by a sewed seam. Fig. 2, is an edge view thereof. Fig. 3, is a face view of a strip of fabric provided with a vulcanized rubber coating and used in my process. Fig. 4, is an edge view of the strip shown in Fig. 3. Fig. 5, is a view of the parts shown in Fig. 1 with the parts shown in Fig. 3 applied thereto. Fig. 6, is a view similar to Fig. 5 showing one of the parts partly removed. Fig. 7, is a face view of the reinforcing strip. Fig. 8, is an edge view of the reinforcing strip. Fig. 9, is a view of the seamed pieces of fabric shown in Fig. 1 with the reinforcing strip applied thereto at the completion of my process.

The seams to which the reinforcing strips are applied are usually formed, as clearly shown in Figs. 1 and 2, by sewing two edge portions of the waterproof fabric 2 together by a line of stitches 3 and folding the edge portions down upon the body of the fabric.

I employ in my improved process a fabric provided on one of its faces with a coating of vulcanized india rubber such as is commonly employed in the manufacture of waterproof garments. As generally stated, this coating is produced by making a paste or solution of india rubber, benzene or naphtha and sulfur, and spreading the paste upon the cloth and heating it to effect the vulcanization to the proper extent for the purpose intended. In carrying out my invention, the vulcanized rubber coating may be made from a paste of any suitable composition. I also employ in my process a cement formed of india rubber and naphtha, preferably in the proportions of seven gallons of naphtha to fifteen pounds of rubber.

In carrying out my process, I take a strip of fabric 4, as shown in Figs. 3 and 4, provided on one of its faces with a coating of vulcanized rubber 5, and of a width equal or substantially equal to the width of the reinforcing strip to be applied to the seam; and I apply a coating of rubber cement, of the character hereinbefore mentioned, to the face of the vulcanized rubber coating 5 of the strip 4. I then apply the strip 4 to the seam in the fabric 2, placing the cemented face of the vulcanized coating against the face of the fabric 2 and over the seam therein, as shown in Fig. 5. I now pass a suitable hand roller over the strip 4 and roll it down firmly upon the seam and upon the fabric 2 on each side of the seam and then permit the cement to dry. After the cement has dried I apply naphtha to the top of the strip 4 by means of a spongy substance, wool cloth for example, which is dipped into the naphtha and applied to the strip until it penetrates the fabric of the strip 4 and acts upon the coating 5 sufficiently to permit the fabric to be separated from the coating without separating the coating from the fabric 2. I then remove or peel off the strip of fabric 4 from the coating 5, as shown in Fig. 6, leaving the coating 5 firmly united to the fabric 2 on each side of the seam thereof. I now take the reinforcing strip 6, shown in Figs. 7 and 8, and provided on one face with a vulcanizing rubber coating 7, and in all respects like the strip illustrated in Figs. 3 and 4, and I apply a coating of rubber cement, of the character hereinbefore mentioned, to the face of the vulcanized rubber coating 7 of the strip 6; and I also apply a coating of similar rubber cement to the exposed face of the vulcanized rub-

ber 5 upon the fabric 2. I then apply the cemented face of the vulcanized coating 7 to the cemented face of the vulcanized coating 5, as shown in Fig. 9, and pass a hand roller over the reinforcing strip 6 and roll it down firmly upon the underlying seam and fabric 2 and the cement and vulcanized coatings therebetween, and then permit the cement to dry, thereby completing my process and forming a reinforced seam in accordance with the object of my invention as hereinbefore stated.

I claim:

The herein described process of reinforcing a seam for waterproof garments, which consists in taking a strip of fabric provided on one of its faces with a coating of vulcanized rubber and applying rubber cement to the face of the vulcanized coating on the strip, then applying the cemented face to a seamed portion of a waterproof garment and permitting the cement to dry, then applying naphtha to said strip of fabric and removing it from said coating leaving said coating united to said garment, then taking a reinforcing strip of fabric provided on one of its faces with a coating of vulcanized rubber and applying rubber cement to the face of the vulcanized coating on the reinforcing strip, and then applying the cemented face of the coating on the reinforcing strip to the exposed face of the coating on the waterproof garment and permitting the cement to dry.

In testimony whereof I affix my signature in presence of two witnesses.

SIMON KAUFMAN.

Witnesses:

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A. V. GROUPE.