C. B. ARCHER.

POCKET PNEUMATIC CUSHION.

APPLICATION FILED JUNE 2, 1908.

969,439. Patented Sept. 6, 1910.

Fig. 1.

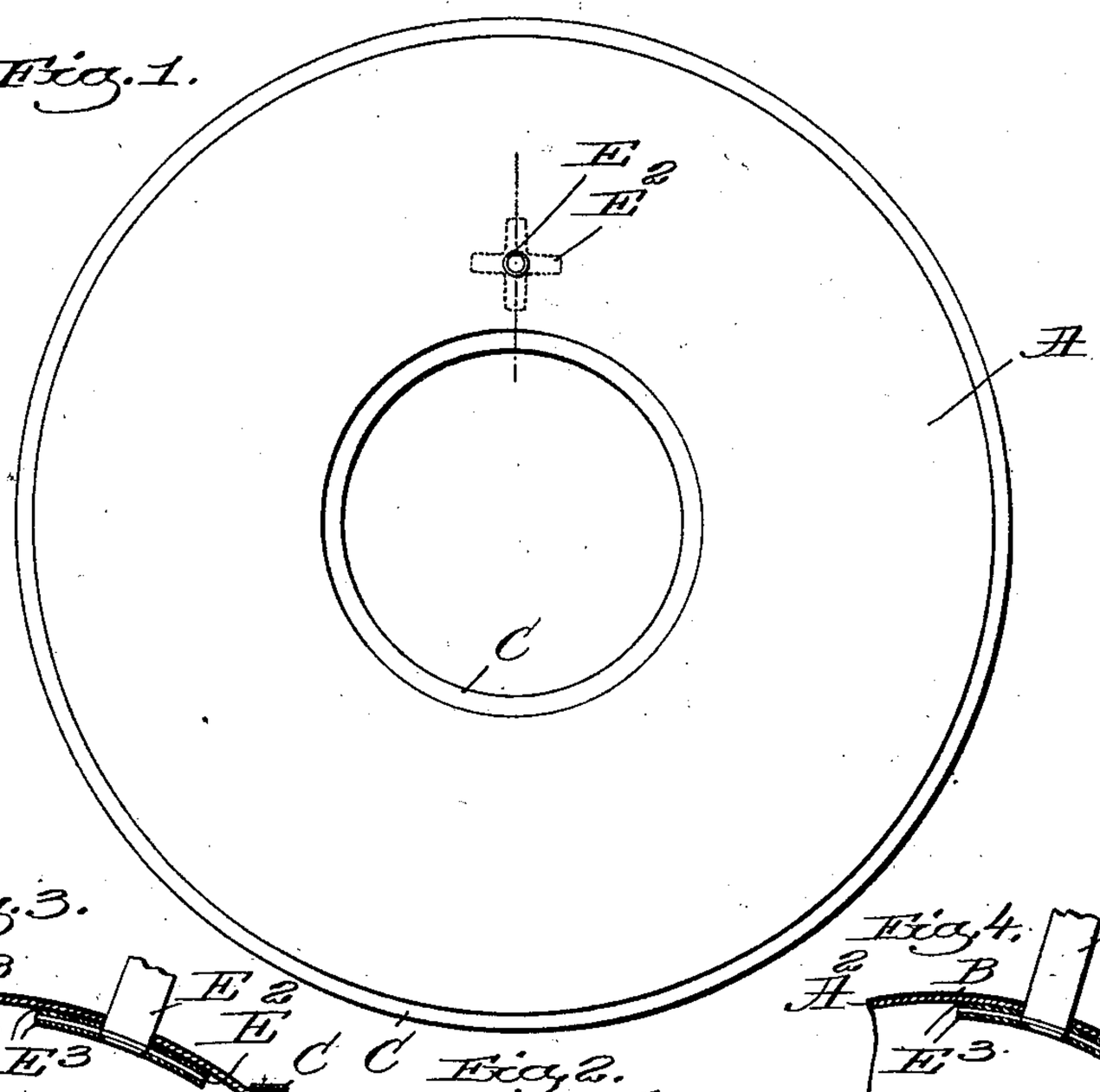


Fig. 3.

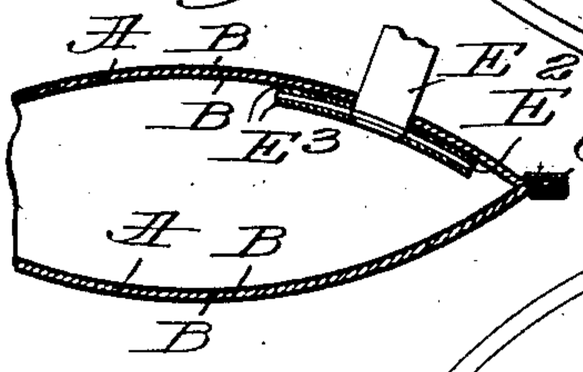


Fig. 4.

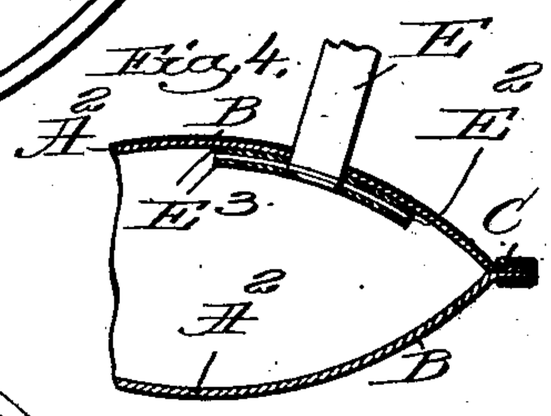


Fig. 2.

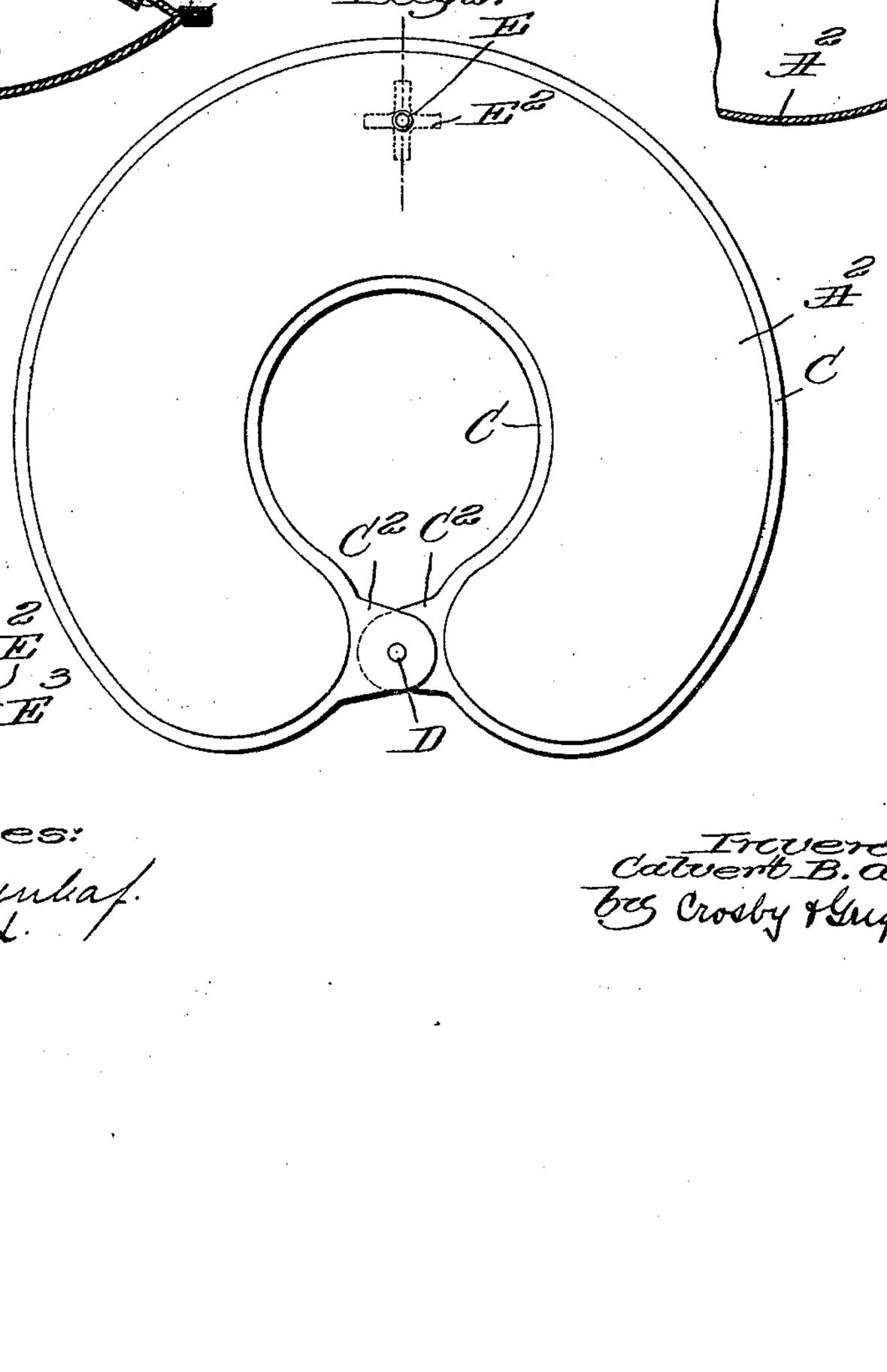
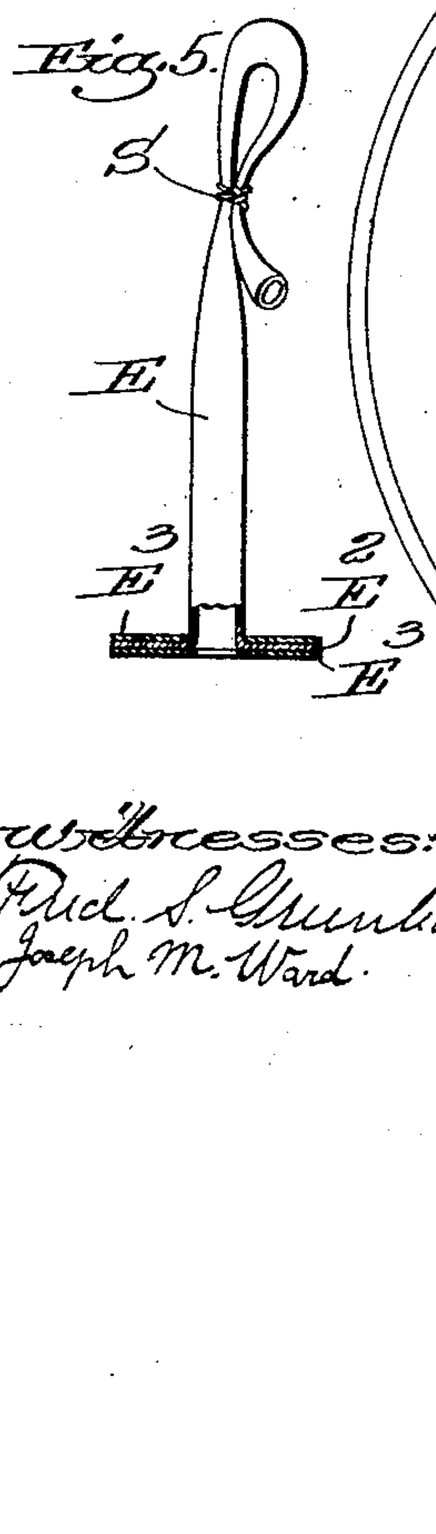


Fig. 5.



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UNITED STATES PATENT OFFICE.

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POCKET PNEUMATIC CUSHION.

969,439. Specification of Letters Patent. **Patented Sept. 6, 1910.**

Application filed June 2, 1908. Serial No. 436,218.

To all whom it may concern:

Be it known that I, CALVERT B. ARCHER, a citizen of the United States, residing at Milford, in the county of Worcester and State of Massachusetts, have invented an Improvement in Pocket Pneumatic Cushions, of which the following description, in connection with the accompanying drawing, is a specification, like letters on the drawing representing like parts.

This invention relates to a pocket pneumatic cushion, or a device which when deflated can be readily carried in the pocket of a garment, and which when inflated can be used as a seat or head rest, as a swimming collar, or life preserver, and for a number of other purposes. Hitherto, such devices when sufficiently air-tight to be of any value have been heavy, cumbersome, and expensive.

The present invention provides a device constructed from a thin, tough, closely woven fabric which possesses the required strength, and a coating on one, but preferably on both sides thereof, of a rubber compound which when applied renders the device air and water tight. The invention also involves an inflating means or device presenting no metallic parts and capable, therefore, of being folded or bent without injury.

The device when completed possesses great strength and is substantially impervious to water and air, or in other words, impervious for as great a length of time as is required in the use of such devices.

The important feature of the invention lies in the fact that the device, including the inflating device, is so constructed that when deflated it can be folded up into such small compass that it can readily be carried in the inside pocket of a man's coat, or in any other small space. For the tourist, camper or canoeist where space is important such a device is of inestimable value. When inflated it can serve as a cushion or pad upon which to sit or lean, or as a collar which can be worn about the neck in swimming, or as a life preserver in case of accident. When used as a swimming collar or life preserver it is preferably made of a shape by which it is more readily adapted to be placed around the neck, and when so placed the valve device may be readily reached by the mouth of the wearer so that it can be reinflated if required. The invention will more fully appear from the accompanying description and drawings and will be particularly pointed out in the claims.

Figure 1 is a plan view of one form of the device. Fig. 2 is a plan view of another form of the device. Fig. 3 is a partial cross-section of the device shown in Fig. 1. Fig. 4 is a partial cross-section of the device shown in Fig. 2. Fig. 5 is a view of the inflating device partially in cross-section.

The device may be made of various shapes, but in the constructions illustrated is annular in form, either closed to form a complete annulus as in Fig. 1, or split to form what may be termed an open annulus as shown in Fig. 2. In either case the body of the device is formed of two layers of material, shown in Figs. 1 and 3 at A, and in Figs. 2 and 4 at A^2, which may be any thin, tough, closely woven fabric. These layers of fabric are then coated in the manner familiar to rubber manufacturers with a high-grade rubber compound which when applied renders the fabric substantially impervious to air and water. It is unnecessary to describe the particular composition of the compound as a large number of suitable compounds for this purpose are familiar to manufacturers, and the components depend largely upon the materials available on the market. Preferably this coating B, as shown in Fig. 3, is applied to both sides of the fabric A, but in some cases this may not be necessary. Especially when the device is to be used simply as a swimming collar or life preserver and is not to be subjected to great pressure, as when it is used as a cushion to sit upon, then the coating B may be applied as in Fig. 4 to but one side thereof. The coated layers of fabric are then assembled and fastened together to form the entire device by cementing around the superimposed edges a binding C.

In Fig. 1 the device is primarily designed to be used as a cushion to sit or rest upon and is shown as annular in form or constituting a complete annulus, while in Fig. 2 it is particularly designed for use as a swimming collar or life preserver, and is shown as an open annulus, by which is meant an annulus which is cut through and which is not particularly annular in shape. In the latter case the binding C is continued to form tabs C^2, and a fastening device, such as a snap button D, is provided, one member being attached to each tab, by which the tabs may be fastened together. The weight,

expense, and inflexibility of a metallic valve is done away with, and the inflating device comprises simply a long, small rubber tube E, split at its lower end as at E^2 and having the split portion confined between and cemented to two disks E^3 of rubber-coated fabric. The rubber tube E is then passed through a small hole in one of the layers A or A^2, and the upper disk A^3 cemented against the layer.

The device is inflated by blowing through the rubber tube E and the air is retained by either tying a knot in the tube E, or by bending over the end of the tube as shown in Fig. 5, and tying it with a piece of string S.

The device in the form shown in Fig. 2 can be placed around the neck of the wearer, the snap button D fastened, and it is then suitable for use as a swimming collar or life preserver. If, for any reason, the wearer is obliged to remain for a long period in the water and the device should become at all deflated, the tube E will be in easy reach of the mouth of the wearer and the device can be readily reinflated.

Having described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. A pocket pneumatic cushion formed of two layers of thin, tough, closely woven fabric, cemented together at their edges and coated with a thin water and air tight rubber compounded coating, and provided with an inflating device formed entirely out of flexible non-metallic material and consisting of a soft rubber tube split at one end and having its split portion cemented between two pieces of flexible material, which pieces are in turn cemented to the inner surface of the cushion surrounding the opening for said inflating device.

2. A pocket pneumatic cushion formed of two layers of thin, tough, closely woven fabric, coated with a thin water and air tight rubber compounded coating, and provided with a non-metallic flexible inflating device, said cushion being of the general form of an open annulus, a binding strip connecting the superimposed edges of said layers, tabs formed on said binding and projecting therefrom at the ends of said open annulus, a snap fastener having one end secured to each tab whereby a closed collar adapted to fit the neck of the user may be formed.

3. A pocket pneumatic cushion formed of two layers of thin, tough, closely woven fabric, cemented together at their edges and coated with a thin water and air tight rubber compounded coating, and presenting the general form of an open annulus, a binding strip connecting the superimposed edges of said layers, tabs formed on said binding strip and projecting therefrom at the ends of said open annulus, a snap fastener having one member secured to each tab whereby a closed collar adapted to fit the neck of the user may be formed, an inflating device formed entirely out of flexible non-metallic material, and consisting of a soft rubber tube split at one end and having its split portion cemented between two pieces of flexible material, which pieces are in turn cemented to the inner surface of the cushion surrounding the opening for said inflating device, the said tube being located within reach of the mouth of the user whereby the collar may be inflated without being removed from the neck.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

CALVERT B. ARCHER.

Witnesses:
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