C. W. MEINECKE.

COMBINED AIR AND STUFFED CUSHION.

APPLICATION FILED JUNE 29, 1916.

1,218,291.

Patented Mar. 6, 1917.

2 SHEETS—SHEET 1.

FIG. 1.

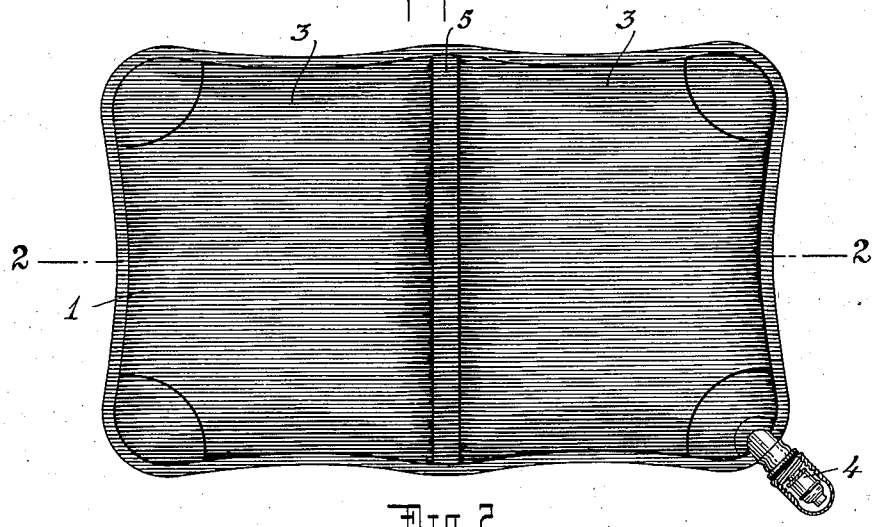


FIG. 2.

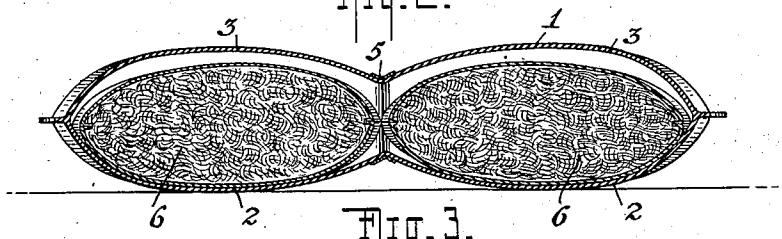
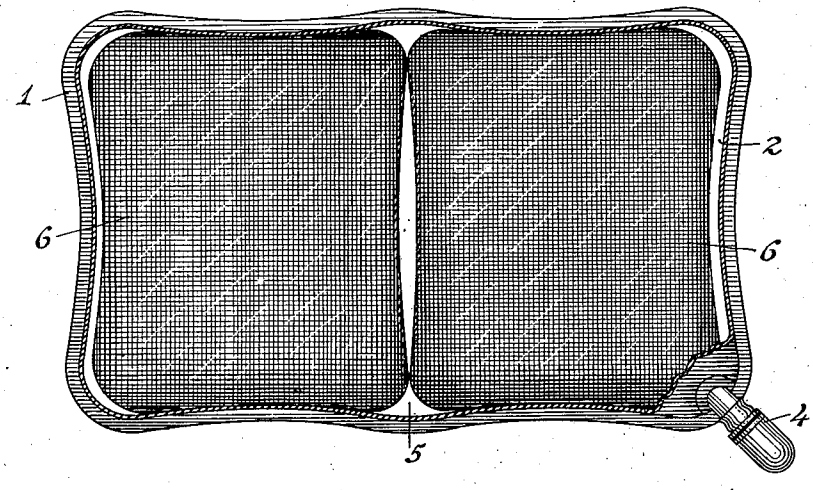


FIG. 3.



WITNESSES

G. V. Rasmussen

Edwin Stirling

INVENTOR

CHRISTIAN W. MEINECKE

BY

Briesen & Schreck

ATTORNEYS

C. W. MEINECKE.

COMBINED AIR AND STUFFED CUSHION.

APPLICATION FILED JUNE 29, 1916.

1,218,291.

Patented Mar. 6, 1917.

2 SHEETS—SHEET 2.

Fig. 4.

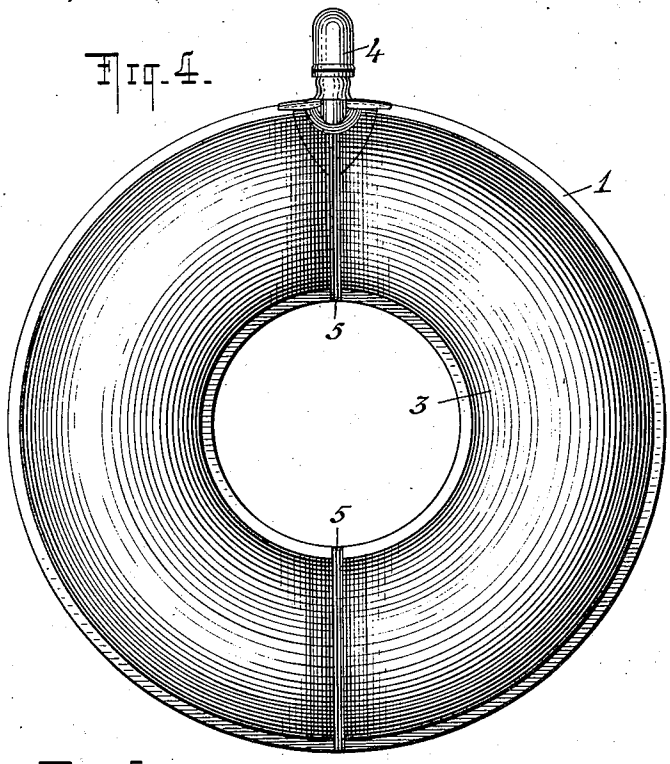


Fig. 5.

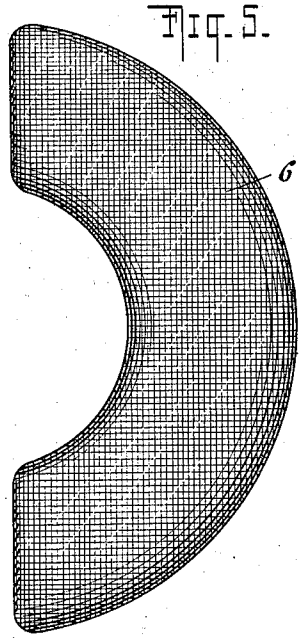


Fig. 6.

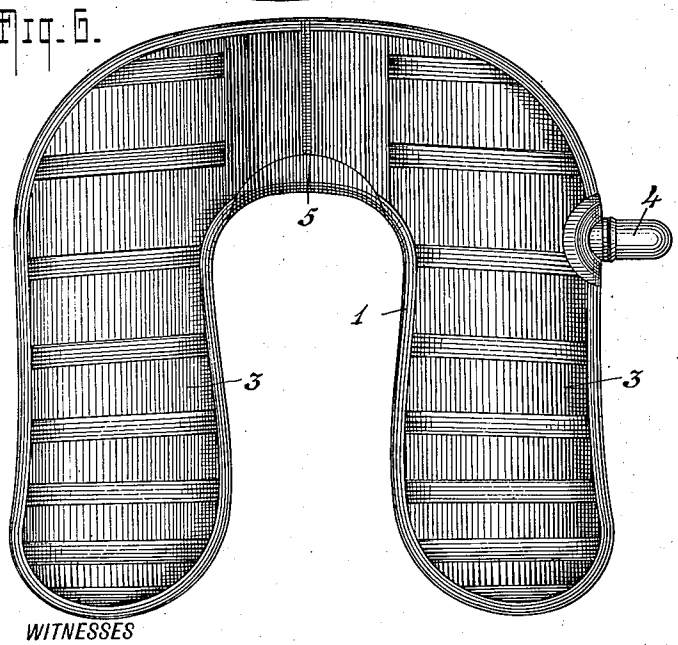
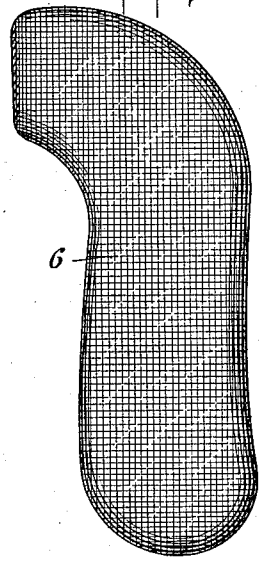


Fig. 7.



WITNESSES

G. V. Rasmussen

Edmund Shipman

INVENTOR

CHRISTIAN W. MEINECKE

BY

Bissell & Schrenk

ATTORNEYS

UNITED STATES PATENT OFFICE.

CHRISTIAN W. MEINECKE, OF EAST ORANGE, NEW JERSEY, ASSIGNOR TO MEINECKE & COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

COMBINED AIR AND STUFFED CUSHION.

1,218,291. Specification of Letters Patent. Patented Mar. 6, 1917.

Application filed June 29, 1916. Serial No. 106,549.

To all whom it may concern:

Be it known that I, CHRISTIAN W. MEINECKE, a citizen of the United States, residing at East Orange, county of Essex, and State of New Jersey, have invented certain new and useful Improvements in Combined Air and Stuffed Cushions, of which the following is a specification.

My invention relates to cushions or pillows, especially such as are used in medical and surgical practice. However, the invention is applicable to cushions for all purposes.

More particularly still, my invention may be said to relate to air cushions or pillows of various shapes and sizes.

Air cushions, as usually made, may be inflated to a greater or less degree. The quality of the cushion effect is, however, substantially unchanged by such varying degrees of inflation so that the principal advantage of inflations of different degrees is the ability to vary the size of the cushion.

In medical and surgical use, however, it is often desirable to vary the quality of the cushion effect and to make the cushion harder or softer according to the conditions present. This is particularly true when some part of the body must be supported during the performance of surgical operations. Here, the ordinary air cushion lacks sufficient stability and permits a certain amount of wabbling which interferes with the accurate work demanded of the surgeon. In such cases, it has been usual to substitute, for the air cushion, a cushion stuffed with hair, sand or equivalent material.

In my invention, about to be described, I provide a cushion which can, at will, be given either the qualities of a stuffed cushion or of an air cushion; or it may be given qualities intermediate between the stuffed cushion and the air cushion. It is thus unnecessary for any change of cushions to be made when a surgical operation is to be performed and the same cushion may be used at this time as is used at other times.

My invention will be better understood by referring to the accompanying drawings in which Figure 1 represents a plan view of a usual form of cushion according to my invention; Fig. 2 represents a sectional elevation taken along the line 2—2 of Fig. 1; Fig. 3 is the same as Fig. 1 but with the top or cover of the cushion removed to disclose the interior structure; Fig. 4 is a cushion of the life preserver type made according to my invention; Fig. 5 is a plan view of one of the two stuffing bags used in the cushion of Fig. 4; Fig. 6 is a plan view of still another form of cushion according to my invention; and Fig. 7 is a plan view of one of the two stuffing bags used in the cushion of Fig. 6.

Referring to Figs. 1 to 3, the cushion 1, rectangular in shape, comprises the usual body (bottom 2 and top 3), made of rubberized fabric or the equivalent, equipped with an air valve 4, which, taken as a whole, constitutes the ordinary air pillow. The valve is of usual type and arranged so that it may be opened, thus permitting the pillow to be inflated or deflated, or closed so as to contain any desired amount of air, up to the full capacity of the body, within said body. Preferably, the bottom 2 and top 3 of the body are joined together at intervals along a transverse center line 5, thus compelling the cushion to remain of a generally flat form at all times whether inflated or deflated.

On each side of the center line 5, and placed within the rubberized body before its parts are finally vulcanized together, are stuffing bags 6 filled with air or other equivalent cushion material. Each of these bags is, in effect, a small cloth covered hair pillow. The size of the bags 6 is so determined that when the body is fully inflated, there will be a substantial air space between the tops of the bags 6 and the inner side of the cover 3. A sufficient amount of hair is used to keep the bags 6 fully distended.

In use, the valve 4 may be opened and the cushion fully inflated by blowing up in the usual way. The cushion may then be used in exactly the same way as if it were an air cushion of usual type and the quality of the cushion effect will be exactly the same as if it were such an air cushion. By opening the valve and allowing a suitable amount of the air to escape, the cushion will have some of the qualities of the usual air cushion and some of the qualities of a stuffed cushion. That is to say, the cushion, while having somewhat of the wabbly unstable feel of an air cushion, will also present a certain amount of hardness due to the fact that the top 3 will come into contact with the stuffing bags 6 at various points although these

points may change with change in the position of the user. By again opening the valve and allowing still more air to escape, what may be termed the air effect of the cushion will disappear to a greater and greater degree while, conversely, the hard or stuffed effect of the cushion will appear in greater degree. By leaving the valve open, and rolling or folding the pillow upon itself and then closing the valve, the pillow may be given a maximum hardness with no air effect whatever. In this condition the cushion will be found very useful as a support in surgical operations.

An important advantage of the cushion of my invention is that, for most purposes, the cushion is substantially self inflating and does not require to be inflated forcibly. It is sufficient, there being no extraneous pressure upon the cushion, to open the air valve. This will permit the elastic stuffing material to expand to the maximum limits permitted by the pervious cover with which it is surrounded, thus in turn expanding and filling out the outer air-tight cover. When fully expanded the valve need merely be closed. Of course to get the maximum air cushion effect still more air must be gotten within the outer air-tight inclosure and this can only be accomplished by forcible inflation.

Ordinarily when it is intended to use the cushion as an ordinary stuffed cushion, it is immaterial whether the valve be closed after deflation or not, but it is preferable to have the valve open, which will keep the cushion deflated whenever there is any pressure thereon.

The cushions shown in Figs. 4 and 5, are, except for their shape, of exactly the same character and are used in exactly the same way as the cushion just described and shown in Figs. 1 to 3 inclusive. The stuffing bags 6 for the cushion shown in Fig. 4 are preferably formed as half rings and the stuffing bags 6 for the form shown in Fig. 6 are similarly shaped to fill one half of the cushion.

While I have shown certain preferred forms of cushion, it is obvious that my invention may be applied to cushions of all shapes and sizes. It is similarly obvious that the material with which the stuffing bags are filled may be anything suitable for stuffing cushions. Furthermore, it is not necessary that the hair or equivalent stuffing material be confined in an independent cover as herein shown and described; if desired, the material may simply be placed in the body 1 of the cushion without any special covering medium between it and the interior walls of said body. If, however, the stuffing material be independently inclosed in casings before being inserted in the body 1 of the cushions, then the casing material should be readily pervious to air. The number of stuffing bags employed for an individual cushion is also merely a matter of convenience and one or any desired number more than one may be used.

Having described my invention, I claim:

1. A cushion comprising, in combination, an inclosure of air tight material, a valve for said inclosure which may be opened or closed at will so as to permit of a greater or lesser amount of air to be contained within said inclosure, stuffing material within said inclosure, and an independent covering material for said stuffing material the volume occupied by the stuffing material being less than the volume contained by the air tight inclosure when completely filled with air.

2. A cushion comprising, in combination, an inclosure of air tight material, a valve for said inclosure which may be opened or closed at will so as to permit of a greater or lesser amount of air to be contained within said inclosure, highly elastic stuffing material within said inclosure, and an independent air pervious covering material for said stuffing material the volume occupied by the stuffing material being less than the volume contained by the air tight inclosure when completely filled with air.

In testimony whereof I have hereunto set my hand.

CHRISTIAN W. MEINECKE.