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B. C. OGLE, JR
BLOOD PRESSURE CUFF

3,606,880

Filed April 18, 1969

2 Sheets-Sheet 1

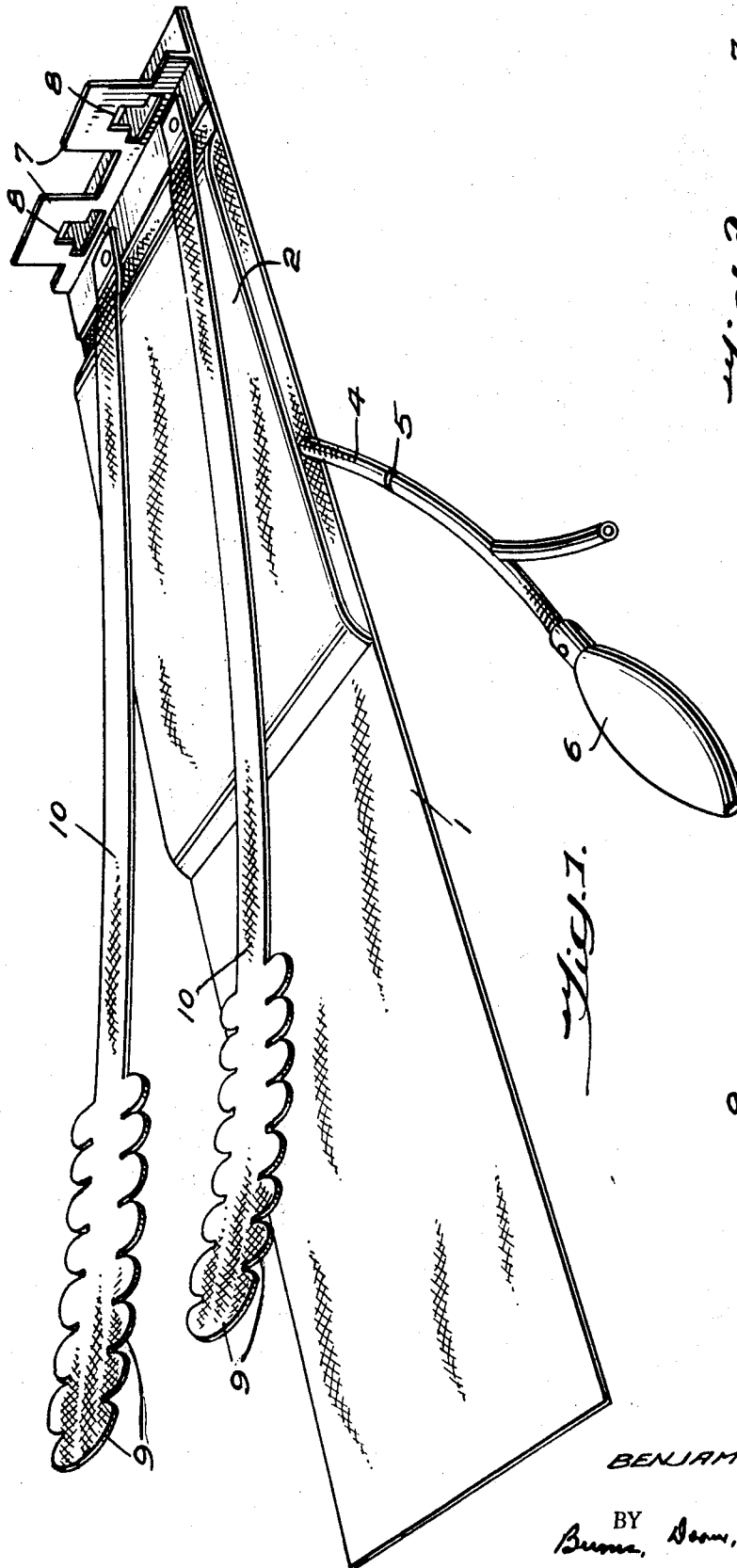


Fig. 1.

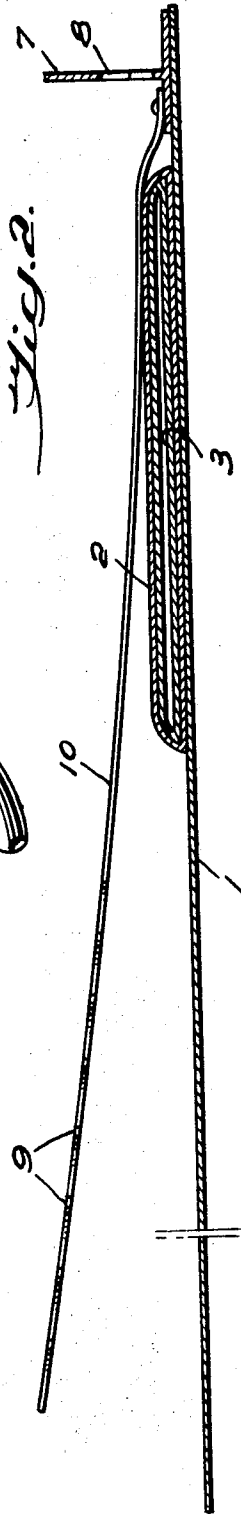


Fig. 2.

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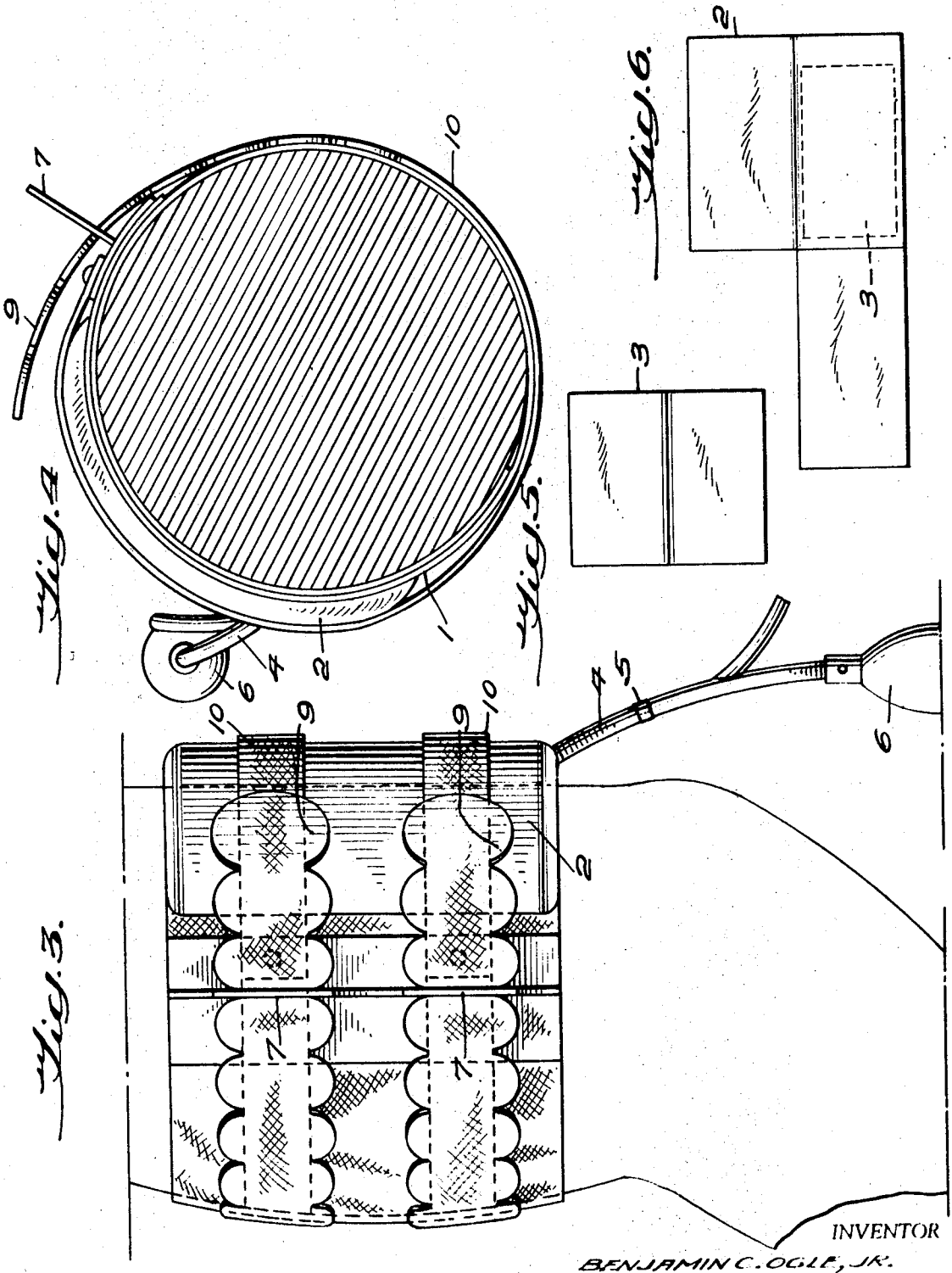
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3,606,880
BLOOD PRESSURE CUFF
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6 Claims

ABSTRACT OF THE DISCLOSURE

A blood pressure cuff made to be disposable, having a cover sheet of relatively thin material provided with a closed envelope adjacent one end thereof containing an elastic or plastic bag adapted to be inflated and to be connected with a tube leading out of the envelope for attachment of a bulb and a manometer. Attached to the end of the sheet is means for anchoring the cuff about the limb after wrapping it therearound.

SUMMARY OF THE DISCLOSURE

This invention relates to improvements in blood pressure cuffs of the character which may be applied, for example, to the human arm to test the blood pressure of a patient.

Most blood pressure cuffs as used heretofore are transferred from one patient to another, usually without laundering between uses, and may spread infections between hospital patients by this medium. No practical, completely disposable, blood pressure cuff has been used in service heretofore.

One object of this invention is to provide a blood pressure cuff which may be assigned to each patient when he enters a hospital, to remain with him throughout his hospitalization or for a substantial period of time and to be used solely for testing his blood pressure. After his discharge from the hospital, the cuff would be disposed of.

Another object of the invention is to provide a blood pressure cuff of a material and construction which would make it readily disposable for attachment and detachment of the operating parts thereof and yet to enable the cuff to be used only for one patient and then to be disposed of after the completion of such use.

Still another object of the invention is to simplify and improve the construction of blood pressure cuffs to enable these to be manufactured inexpensively but effective for the purpose.

These objects may be accomplished, according to one embodiment of the invention, by providing a sheet of cover material which is inelastic and which is adapted to encircle the arm or other limb. Secured upon one face of the cover sheet adjacent an end thereof, is an envelope of inelastic material containing therein an elastic or plastic bag of expandable material, such as the usual rubber inflatable bag normally employed heretofore in blood pressure cuffs and which is enclosed in the envelope, the latter being closed throughout and secured upon the cover sheet. The elastic bag has a tube connected thereto extending out through the envelope, having a detachable coupling for connection with the usual operating parts, such as a bulb or manometer. Between the envelope and the adjacent end of the cover sheet, means is attached to the end of the cover sheet for anchoring the cuff about the limb. This means may be in the form of straps and lock tabs.

BRIEF DESCRIPTION OF THE DRAWINGS

This embodiment of the invention is illustrated in the accompanying drawings, in which:

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FIG. 1 is a perspective view of the blood pressure cuff before application;

FIG. 2 is a longitudinal sectional view therethrough;

FIG. 3 is a side elevation of the cuff applied to the arm;

FIG. 4 is a cross section therethrough;

FIG. 5 is a plan view of the blank for forming the inflatable bag; and

FIG. 6 is a similar view showing the blank for the envelope.

DETAILED DESCRIPTION OF THE DRAWINGS

The blood pressure cuff, as illustrated, comprises a cover sheet, generally indicated by the numeral 1 and formed of a suitable inelastic material, such as rayon. This envelope 2 preferably extends throughout the width of the cover sheet 1 and is enclosed throughout.

An elastic bag 3 is contained within the envelope 2, adapted to be inflated. The usual rubber inflatable bag may be used for this purpose, as employed heretofore in blood pressure cuffs, although, as indicated in FIG. 5, the bag may be formed of a sheet of suitable elastic plastic material folded upon itself and heat sealed around three edges thereof for simplicity of manufacture. Likewise, the envelope 2 may be formed from a sheet of material, as shown in FIG. 6, by folding and stitching or otherwise sealing the edges to enclose the bag 3 within the envelope.

Connected with the bag 3 and extending out through the envelope 2 is a tube 4 having a male and female coupling, generally indicated at 5, for connection with a plastic bulb 6 or the usual rubber bulb and with a suitable manometer. These latter parts may be detached from the disposable cuff and reused.

The end portion of the cover sheet 1 adjacent the envelope 2 has means connected thereto for securing the cuff about the limb. In the form illustrated, this means comprises a pair of upstanding tabs 7 having locking slots 8 therein adapted to receive notched segments 9 on the ends of straps 10, the opposite ends of which straps are secured upon the face of the cover sheet 1 between the envelope 2 and the adjacent end of the cover sheet.

The cuff is wrapped about the arm or other limb in the usual way, with the straps 10 externally of the envelope 2 confining the latter. The cuff is held in place therearound by the fastening means 7-10, in this embodiment. It will be noted here that the sheet 1 is located between the envelope 2 and the arm. This eliminates any seam or rough area on the surface of the cuff bearing in contact with the patient's arm.

All of the blood pressure cuff, with the exception of the operating parts, such as the bulb, manometer, and connected tube, may be kept initially wrapped in sterile condition. This cuff would then be issued to each patient when he enters a hospital, to remain with him throughout his hospitalization or for a substantial period of time. When the sterile blood pressure cuff is opened, it is only necessary to attach the pressure instrument thereto at the tube 4 and coupling 5 to provide an operating cuff which is used in the usual way except that the cuff remains with the patient. However, when his hospitalization is completed, the instruments are then detached therefrom at 5 and the cuff part is destroyed. This prevents danger of infection from one patient to another.

The blood pressure cuff is of simple and inexpensive construction so that it can readily withstand one period of usage for each patient and yet is strong enough to fulfill the requirements for this purpose. The cover 1 and envelope 2 being of inelastic material will allow an even application of pressure to the entire circumference of the arm for an accurate determination of blood pressure.

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While the invention has been illustrated and described in one embodiment, it is recognized that variations and changes may be made therein without departing from the invention as set forth in the claims.

I claim:

1. A disposable blood pressure cuff comprising a cover sheet of inelastic material, an envelope of inelastic material secured to the cover sheet at one end portion thereof, an elastic bag enclosed within the envelope and having a tube connected thereto and extending outward from the envelope for connection of inflating means thereto, the cover sheet being adapted to be wrapped about a limb and to hold the elastic bag in pressure relation to the limb, and detachable fastening means connected with the cover sheet at said one end, said detachable fastening means including a strap extending on the outer side of the envelope about the cover sheet and envelope applied to the limb and anchored at one end to the cover sheet at said one end portion beside the envelope and beyond the end of the envelope, and means for releasably anchoring the other end of the strap to said one end of the cover sheet.

2. A blood pressure cuff according to claim 1, wherein the envelope is permanently enclosed about the elastic bag and is secured upon one face of the cover sheet.

3. A blood pressure cuff according to claim 1, wherein the cuff securing means is connected with the cover sheet between the envelope and the adjacent end of the cover sheet and includes a strap anchored at one end to the cover sheet and having a notched segment at the opposite end, and a tab on said end of the cover sheet having detachable engagement with the notched segment of the strap.

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4. A blood pressure cuff according to claim 1, wherein the cover sheet is composed of a single layer of fabric.

5. A disposable blood pressure cuff comprising an elongated cover sheet of inelastic fabric material, an envelope located at one end portion of the cover sheet with the opposite end portion of the cover sheet forming a wrapping section adapted to extend around a limb, an elastic bag enclosed within the envelope and having means for connection with inflating means, a strap anchored at one end to said one end of the cover sheet spaced outwardly from the adjacent end of the envelope on the opposite side of the envelope from the wrapping section for extending around the envelope and the wrapping section in place about the limb, and means for detachably connecting the opposite end of the strap with said one end of the cover sheet.

6. A cuff according to claim 5, wherein the connecting means is a tab extending outwardly from the face of the cover sheet and has means for detachable connection with the opposite end of the strap.

References Cited

UNITED STATES PATENTS

25	1,063,287	6/1913	Rogers et al.	128—2.05U
	1,089,122	3/1914	Faught et al.	128—2.05U
	1,810,027	6/1931	Moran et al.	128—3.27X
	2,982,123	1/1952	Heitz	128—2.05C

30 WILLIAM E. KAMM, Primary Examiner