

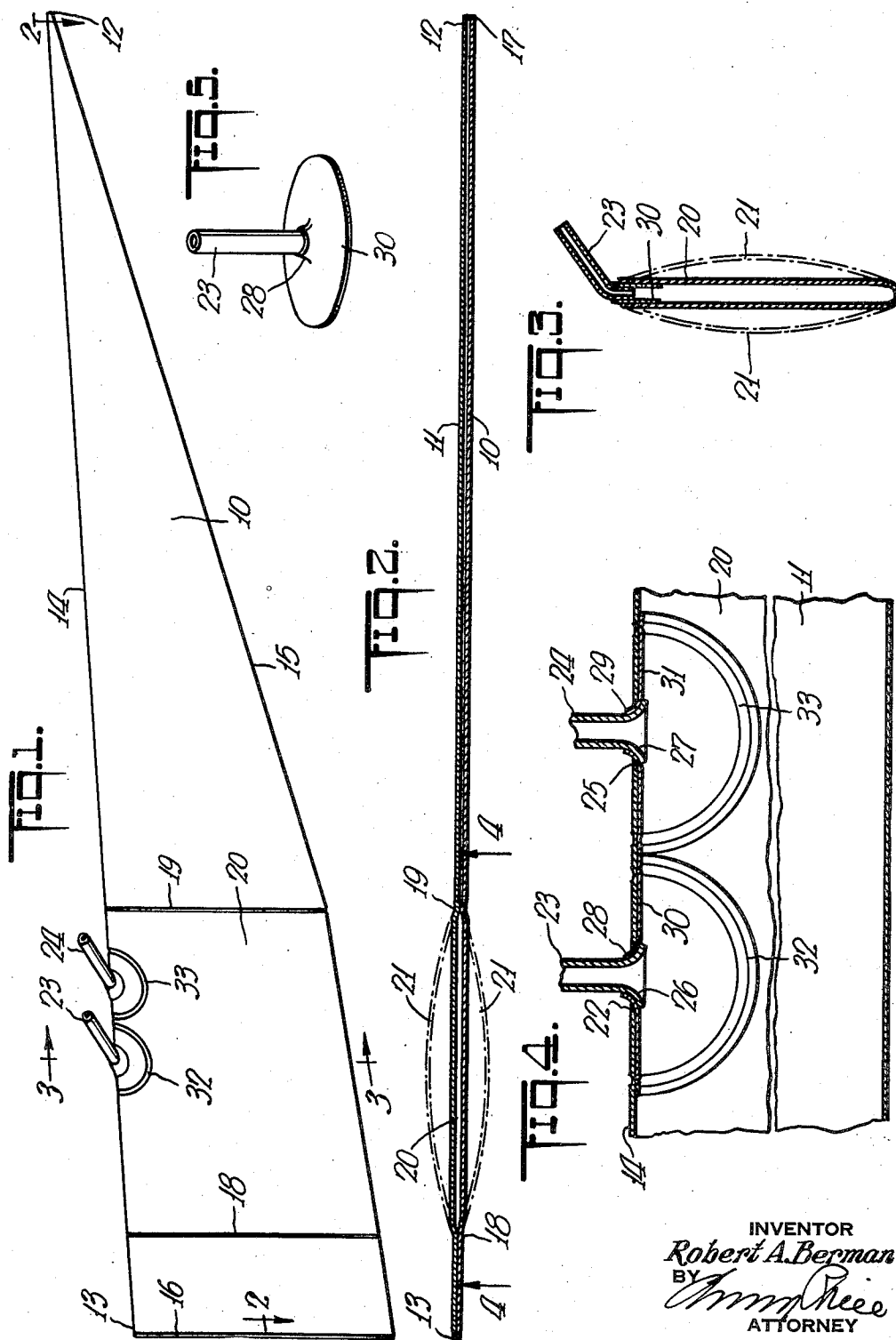
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PLASTIC INFLATABLE BLOOD PRESSURE CUFF

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PLASTIC INFLATABLE BLOOD PRESSURE CUFF

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6 Claims. (Cl. 128—2.05)

The present invention relates to a plastic inflatable blood pressure cuff and it particularly relates to an all plastic sleeve or bandage which may be utilized for measuring blood pressure.

It is among the objects of the present invention to provide a one-piece, inflatable, plastic blood pressure measuring cuff which may be molded inexpensively out of thin plastic materials which will be devoid of fabrics which tend to soil or acquire odors and which is readily washable, cleanable and sterilizable.

Another object is to provide a simple, inexpensive, one-piece, all plastic blood pressure measuring cuff which will enable a more accurate blood pressure determination and which will be more readily applied and more readily handled both for carriage by the physician as well as upon application to the patient.

Still further objects and advantages will appear in the more detailed description set forth below, it being understood, however, that this more detailed description is given by way of illustration and explanation only and not by way of limitation, since various changes therein may be made by those skilled in the art without departing from the scope and spirit of the present invention.

In accomplishing the above objects it has been found most satisfactory, according to one embodiment of the present invention, to form a blood pressure measuring cuff of a double sheet of a thin plastic material, such as polymerized vinyl resin, which sheet may be sealed at spaced points so as to give inflatable pockets therein.

These inflatable pockets may be provided with openings and patches for attachment of suitable inlets and outlets for applying or creating pressure therein.

With the foregoing and other objects in view, the invention consists of the novel combination, construction and arrangements of parts as hereinafter more specifically described, and illustrated in the accompanying drawings, wherein is shown an embodiment of the invention, but it is to be understood that changes, variations and modifications can be resorted to which fall within the scope of the claims hereunto appended.

In the drawings wherein like reference characters denote corresponding parts throughout the several views:

Fig. 1 is a side elevational view showing a form of blood pressure measuring cuff according to the present invention.

Fig. 2 is a transverse longitudinal sectional view upon the line 2—2 of Fig. 1.

Fig. 3 is a transverse vertical sectional view upon the line 3—3 of Fig. 1 upon an enlarged scale as compared to Figs. 1 and 2.

Fig. 4 is a longitudinal sectional view upon the line 4—4 of Fig. 2 upon an enlarged scale as compared to Figs. 1 and 2.

Fig. 5 is a perspective view showing a combined tubular member and patch to be attached to the blood pressure measuring cuff for establishing communication with the interior of the cuff.

Referring to Figs. 1 to 3, the blood pressure meas-

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uring cuff is formed of two sheets of plastic material 10 and 11 which extend the full length of the cuff from the narrow point 12, where the sleeve is tied to the wide base portion 13.

There may be two sheets 10 and 11 which would be welded or heat-sealed at the upper and lower edges 14 and 15 or there may be a single sheet which would be folded at the lower edge 15 or, preferably, at the upper edge 14.

The base end 13 is desirably also welded or heat-sealed at 16 while the narrow end 12 is open, as indicated at 17.

These two sheets are desirably heat-sealed together at the sealing lines 18 and 19 to form a pocket 20, which may be inflated as indicated by the dotted line 21.

This inflatable pocket 20 at its folded, upper edge 14 is desirably provided with openings 22 and 25.

The openings 22 and 25 receive respectively the tubular, plastic connections 23 and 24.

The tubular members extend through the openings 22 and 25 and are flared outwardly, as indicated at 26 and 27, inside of the pocket 20.

These flared portions 26 and 27 are welded or cemented to the central openings 28 and 29 in the patches 30 and 31.

The patches are welded to the upper portion of the pocket around the openings 22 and 25 along the circular sealing lines 32 and 33.

The cuff as shown may be readily made by first forming the connection between the tube 23 and 24 and the patches 30 and 31.

Then the flat sheet of material, before folding at 14 and sealing at 15, 16, 18 and 19, is assembled with the tubes and patches 30 and 31, which are sealed in position.

Then the sheet is folded at 14 and sealed at the unfolded cut edges 15 and 16 and then at 18 and 19 to form the pocket.

The pocket 20 may be readily inflated by air forced into the tube 23 or 24 and the other tube may permit connection to a measuring device or manometer.

There is thus provided a simple, durable, all-plastic cuff for measuring blood pressure, which is readily washable.

It may be readily applied to the arm for measuring blood pressure and is very compact, occupying a minimum of space in the doctor's bag.

It also may be discarded and replaced at low cost and is reliable and sensitive.

While there has been herein described a preferred form of the invention, it should be understood that the same may be altered in details and in relative arrangement of parts within the scope of the appended claims.

Having now particularly described and ascertained the nature of the invention, and in what manner the same is to be performed, what is claimed is:

1. An all plastic, folded integral sheeting, blood pressure measuring cuff having a rectangular portion and elongated tapered tying portion comprising two elongated sheets of heat-sealing plastic material connected at their longitudinal edges, by folding at one edge and heat-sealing at the other edge, said cuff having a central inflatable pocket in said rectangular portion and inlet and outlet connections to said pocket.

2. An all plastic, folded integral sheeting, blood pressure measuring cuff having a rectangular portion and elongated tapered tying portion comprising two elongated sheets of heat-sealing plastic material connected at their longitudinal edges, by folding at one edge and heat-sealing at the other edge, said cuff having a central inflatable pocket in said rectangular portion and inlet and outlet connections to said pocket, said pocket being formed by transversely heat-sealing the sheets together adjacent said connections.

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3. An all plastic, folded integral sheeting, blood pressure measuring cuff having a rectangular portion and elongated tapered tying portion comprising two elongated sheets of heat-sealing plastic material connected at their longitudinal edges, by folding at one edge and heat-sealing at the other edge, said cuff having a central inflatable pocket in said rectangular portion and inlet and outlet connections to said pocket, said connections consisting of discs with plastic tubing sections attached thereto, said disc being cemented inside of said pocket and said tubing sections extending through said folded edge.

4. An all plastic, folded integral sheeting, blood pressure measuring cuff having a rectangular portion and elongated tapered tying portion comprising two elongated sheets of heat-sealing plastic material connected at their longitudinal edges, by folding at one edge and heat-sealing at the other edge, said cuff having a central inflatable pocket in said rectangular portion and inlet and outlet connections to said pocket, said elongated sheets being formed by folding over a single sheeting.

5. In all plastic, folded integral sheeting, blood pressure measuring cuff having a rectangular portion and elongated tapered tying portion comprising two elongated sheets of heat-sealing plastic material connected at their

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longitudinal edges, by folding at one edge and heat-sealing at the other edge, said cuff having a central inflatable pocket in said rectangular portion and inlet and outlet connections to said pocket, said elongated sheets being formed by folding over a single sheeting, and said connections being made at the fold line.

6. A plastic inflatable blood pressure measuring cuff formed of a folded double sheet of polymerized vinyl resin formed into an elongated sleeve having a rectangular section to contact the arm and an elongated tapered section to wrap around the arm, the opposite edges away from the folded edge being sealed together, and the folded edge having spaced openings and closely spaced parallel plastic tubular members projecting through said openings, said tubular members being flared inside of said openings and having circular patches sealed to the inside of the folded edge and to the flared inside portions of the tubular members.

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