Sept. 24, 1957 W. L. GOULD 2,807,328

STETHOSCOPE

Filed June 18, 1954

Fig. 1

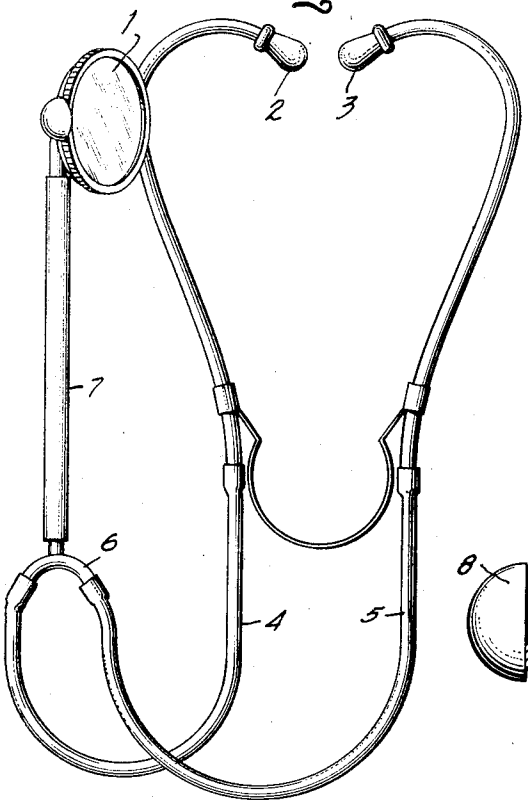


Fig. 2

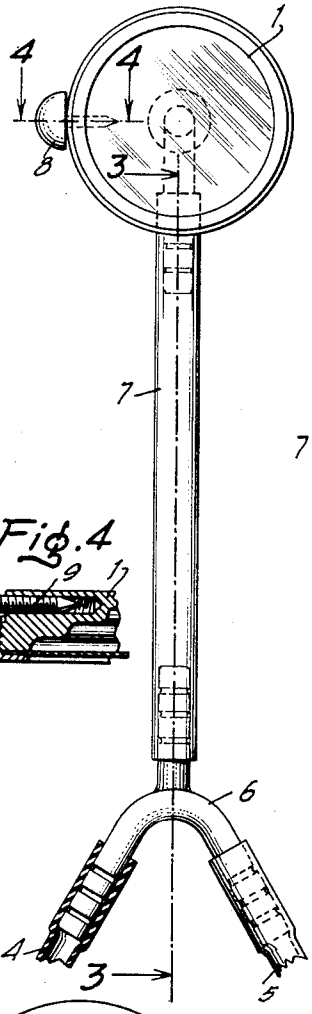


Fig. 3

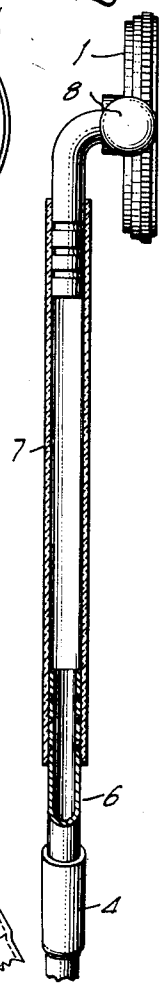
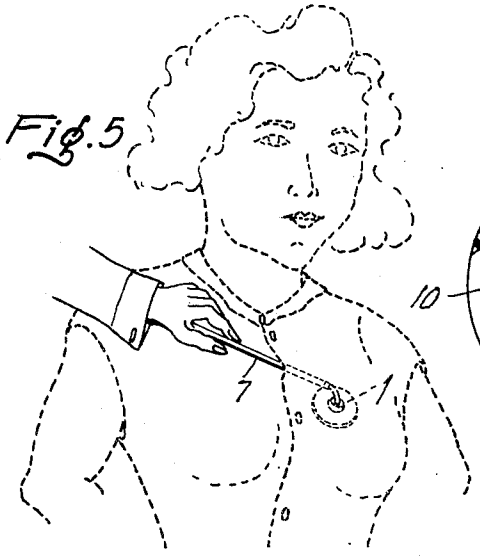


Fig. 4

Fig. 5



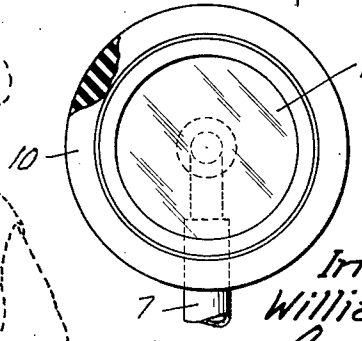


Fig. 6

Inventor
William L. Gould
by
His Attorneys

United States Patent Office

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STETHOSCOPE

William L. Gould, Albany, N. Y.

Application June 18, 1954, Serial No. 437,663

3 Claims. (Cl. 181—24)

My invention relates to stethoscopes, and particularly to stethoscopes of the diaphragm type.

So far as I am aware, all stethoscopes of the diaphragm type are connected to the ear pieces or to the sound conducting tubing extending from the ear pieces by means of a flexible tube which is connected directly to the diaphragm unit. When a stethoscope of this type is used, it is necessary for the physician to grasp the unit itself and hold it in contact with the body of the patient. Thus it is necessary for the physician to insert his hand beneath the clothing of the patient.

The principal object of my invention is to provide a stethoscope of this type in which the diaphragm unit is connected to the flexible, sound conducting tubing leading to the ear pieces by means of a rigid tube of substantial length whereby the physician may insert and manipulate the diaphragm unit beneath the clothing of a patient from a point outside said clothing.

Another object is to provide a stethoscope of this type in which the diaphragm unit is provided with a percussor head for which the rigid tube will form a handle so that the sounds produced by a gentle percussion may be readily detected by the ears.

I accomplish these objects by the means described below and illustrated in the accompanying drawing, in which—

Fig. 1 is a perspective view of my stethoscope;

Fig. 2 is an elevation view of the diaphragm unit with the percussor head thereon and the rigid tube connecting the diaphragm unit to the tubing leading to the ear pieces;

Fig. 3 is a section of Fig. 2 in the plane 3—3;

Fig. 4 is a section of Fig. 2 in the plane 4—4;

Fig. 5 is a view illustrating how the stethoscope may be inserted and manipulated beneath the clothing of a patient from a point outside said clothing; and

Fig. 6 is an elevation view of the diaphragm unit showing a modified type of percussor, partially in section.

Referring to the drawing, 1 is the diaphragm unit, 2 and 3 are the ear pieces and 4 and 5 are the usual flexible, sound conducting tubings which connect the ear pieces with a tubular Y6. 7 is a rigid tube preferably of thermoplastic material which is of substantial length and which connects the diaphragm unit with the Y6.

Secured to one side of the diaphragm unit, as shown in Figs. 1, 2, 3 and 4, is a percussor head 8, preferably of rubber or like material. The head 8 has a threaded stem 9 by means of which it is secured to the side of the diaphragm unit as shown in Fig. 4.

In Fig. 5, I have shown a modified type of percussor head comprising a rubber annulus 10 around the periphery of the diaphragm unit 1.

While I have described my invention in its preferred embodiment, it is to be understood that the words which I have used are words of description rather than of limitation and that changes, within the purview of the appended claims, may be made without departing from the true scope and spirit of my invention in its broader aspects.

What I claim is:

1. A stethoscope comprising a hollow, cylindrical, disk-like unit having a diaphragm therein; ear pieces; flexible, sound conducting tubing connected to said ear pieces; and means, including a rigid tube of substantial length, having its axis in fixed, closely spaced, substantially parallel relation to said diaphragm connecting said flexible tubing to said unit in sound communicating relation with the interior of said unit; whereby said unit may be inserted and manipulated beneath the clothing of a patient from a point outside said clothing.

2. The structure set forth in claim 1 in which said unit is provided with a percussor head on the side thereof; whereby sounds produced by a gentle percussion are readily detected by the ears of the operator.

3. The structure set forth in claim 1 in which the periphery of said unit is enclosed in an annulus of rubber; whereby to form a percussor of which said rigid tube is the handle and sounds produced by gentle percussion may be readily detected by the ears of the operator.

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