A. H. WILKINSON.

STETHOSCOPE.

APPLICATION FILED NOV. 11, 1918.

1,321,266.

Patented Nov. 11, 1919.

Fig. 1.

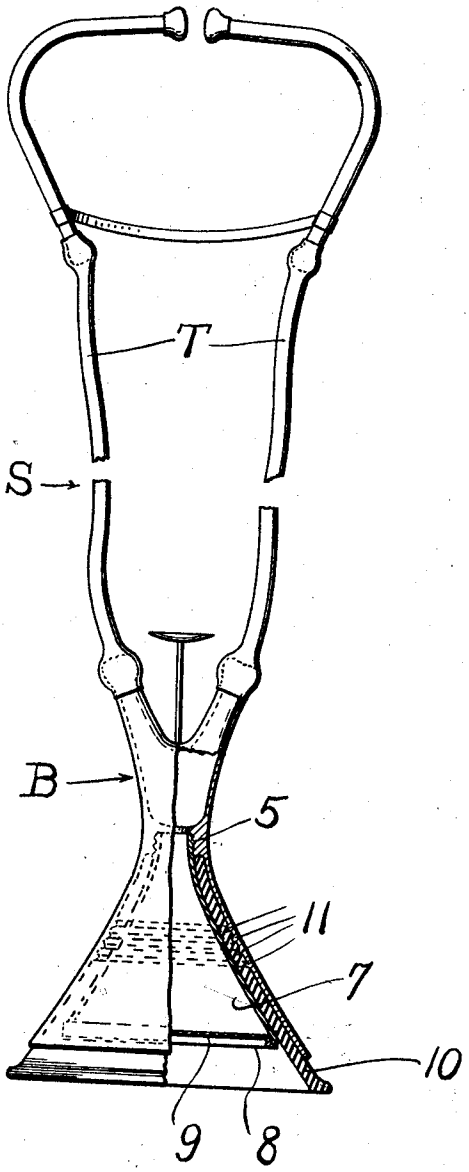


Fig. 2.

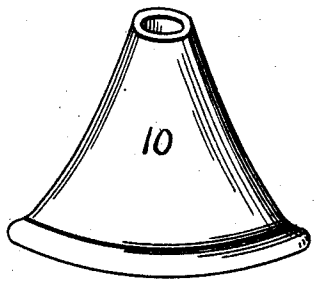
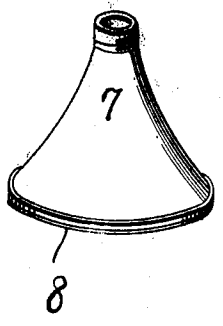


Fig. 3.



Inventor

Albert H. Wilkinson

By Milton Buck

Attorney

UNITED STATES PATENT OFFICE.

ALBERT H. WILKINSON, OF JACKSONVILLE, FLORIDA.

STETHOSCOPE.

1,321,266. Specification of Letters Patent. Patented Nov. 11, 1919.

Application filed November 11, 1918. Serial No. 261,999.

To all whom it may concern:

Be it known that I, ALBERT H. WILKINSON, a citizen of the United States, residing at Jacksonville, in the county of Duval and State of Florida, have invented certain new and useful Improvements in Stethoscopes, of which the following is a specification.

This invention relates to stethoscopes and more particularly to the bell thereof.

The primary object of this invention resides in the provision of means for insulating the sound passage of the bell of a stethoscope from exterior sounds surrounding the same.

Another object of this invention resides in the provision of a stethoscope having an insulated sound passage within which the diaphragm thereof is disposed out of contact with the hairs of that part of the body which is being auscultated.

With these and other objects in view, this invention resides in certain novel features of construction and arrangement of parts to be more particularly set forth in the specification herewith and pointed out in the appended claim, it being understood that the right is reserved to resort to such changes in detail as come within the scope of the claim.

In the accompanying drawing:—

Figure 1 is a side view of a stethoscope showing the bell thereof partly in section;

Fig. 2 is a detail perspective view of the insulating cone;

Fig. 3 is a similar view of the sound cone.

In the present embodiment of this invention the letter S designates a stethoscope which consists of the usual sound conveying tubes T and a bell B of special construction.

In view of the fact that this invention is confined to the elements contained in the bell B, further mention of the sound conveying auxiliaries will be ignored as they perform their usual and well known functions.

The aforesaid bell B is provided with a threaded portion 5 at its contracted portion for engagement with the threads of a sound conveying cone 7 to be hereinafter set forth.

Retained in spaced relation to the major portion of said bell is the sound conveying cone 7 which has screw-threads provided at its contracted end for engagement with the threads of said shoulder 6 and other threads at its expanded end to be engaged by the threads of a collar 8 that retains a diaphragm 9 in the expanded end of the cone 7.

Interposed between the cone 7 and inner surface of the bell B is a medium soft rubber cone 10 which insulates the cone 7 from the major portion of the bell B and extends beyond the diaphragm a sufficient distance to prevent the hairs on that portion of the body which is being auscultated from contacting with the diaphragm.

In order to prevent the displacement of this soft rubber cone 10, the inner surface of the bell B is provided with inwardly directed corrugations 11 which become embedded in the cone when the cone 7 is screwed into operative position in the bell B.

With the aforesaid elements assembled in operative relation it is apparent that all sounds passing through the bell will be insulated from any external sounds and through the contact of the rubber cone with the body, an air tight joint is attained and the internal vibrations are transmitted through a closed air chamber to the diaphragm from which they are conveyed to the ears of the examiner.

While the above sound insulating elements are herein disclosed as being employed in connection with a stethoscope, they can be successfully employed on telephones and other devices where it is necessary to eliminate external sounds to attain the maximum efficiency of sound conveying instruments.

Having thus described this invention what I claim is:—

The combination with a stethoscope, of a bell, a sound conveying cone carried in said bell, a diaphragm carried by said sound conveying cone, a sound insulating cone between said bell and sound conveying cone, and securing means on the inner surface of said bell for engaging said insulating cone.

In testimony whereof I affix my signature.

ALBERT H. WILKINSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."