J. D. POLLARD.

STETHOSCOPE.

APPLICATION FILED JULY 24, 1920.

1,410,034. Patented Mar. 21, 1922.

Fig. 1.

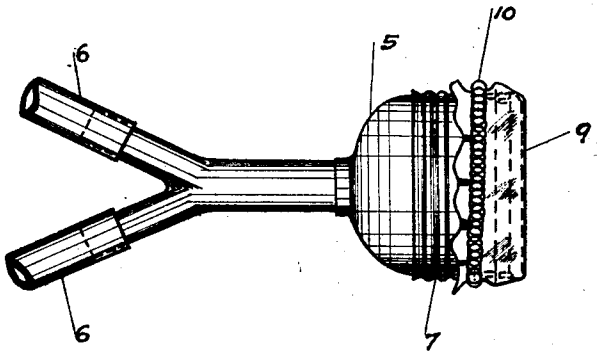


Fig. 2.

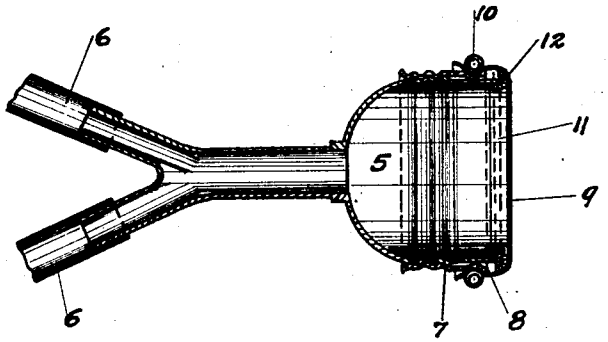


Fig. 4

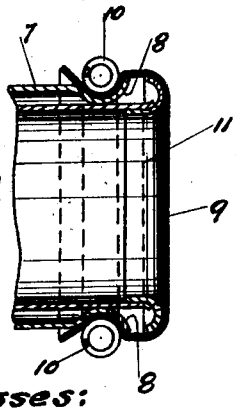
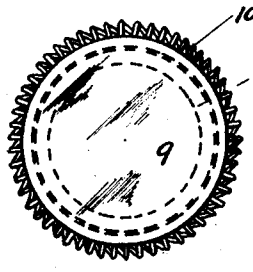


Fig. 3



Witnesses:
C. E. Thuly
B. G. Richards

Inventor
John D. Pollard
By Joshua R. H. Potts
His Attorney.

UNITED STATES PATENT OFFICE.

JOHN D. POLLARD, OF CHICAGO, ILLINOIS.

STETHOSCOPE.

1,410,034. Specification of Letters Patent. Patented Mar. 21, 1922.

Application filed July 24, 1920. Serial No. 398,776.

To all whom it may concern:

Be it known that I, JOHN D. POLLARD, a citizen of the United States, and a resident of the city of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Stethoscopes, of which the following is a specification.

My invention relates to improvements in stethoscopes, and has for its object the provision of an improved construction of this character provided with improved means for varying the tension in the diaphragm thereof, and which is of simple construction, efficient in operation and capable of economical manufacture.

Other objects will appear hereinafter.

The invention consists in the combinations and arrangements of parts hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings forming a part of this specification, and in which,—

Fig. 1, is a side view of the sound chamber of a stethoscope embodying the invention,

Fig. 2, a section of the same,

Fig. 3, an end view of the same, and

Fig. 4, an enlarged partial section taken through the end of the sound chamber of the stethoscope.

The preferred form of construction, as illustrated in the drawings, comprises a sound chamber 5 substantially made of sheet metal and substantially in cylindrical form with its outer side open and equipped with the usual ear pieces, not shown. A diaphragm tightening member in the form of a sheet metal band is fitted over the exterior walls of chamber 5 and threaded thereto as shown. At its outer end, the band 7 is provided with an annular bead or depression 8 adapted and arranged to receive the edges of a rubber diaphragm stretched over the open mouth of the sound chamber 5. The edges of the diaphragm 9 are secured in place by means of an elastic band 10 in the form of a coiled spring resting in the bead 8 as indicated. A guard member 11 in the form of a ring is fitted within the open mouth of the chamber 4 and is provided with a lip 12 fitting over and revolving loosely on the edges of chamber 5 under the diaphragm 9.

By this arrangement, it will be observed that the tension in the diaphragm 9 may be readily adjusted by turning the band 7 one way or the other on chamber 5. The guard member 11 which is directly engaged by the diaphragm 9 is free to turn therewith thus avoiding frictional contact between the edges of the chamber 5 and the diaphragm 9 and consequent injury to the diaphragm. The construction is a simple and effective one for the purpose and capable of economical manufacture.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. A stethoscope comprising a sound chamber having an open side; a guard revolving freely on the edges of said open side; a diaphragm tightening member threaded on said chamber; and a diaphragm stretched over said guard and having its edges secured to said member, substantially as described.

2. A stethoscope comprising a sound chamber having an open side; a guard in the form of a ring fitting within the open side of said chamber and having a lip fitting over and revolving freely on the edges of said open side; a diaphragm tightening member threaded on said chamber; and a diaphragm stretched over said guard and having its edges secured to said member, substantially as described.

3. A stethoscope comprising a sound chamber having an open side, the exterior of said chamber being threaded; a guard mem-

ber in the form of a ring fitting within the open side of said chamber and having a lip fitting over and revolving freely on the edges of said open side; a diaphragm tightening member threaded on the exterior walls of said chamber, said tightening member being provided with a diaphragm securing bead; a diaphragm stretched over said guard with its edges resting in said bead; and elastic means resting in said bead and securing the edges of said diaphragm, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN D. POLLARD.

Witnesses:
JOSHUA R. H. POTTS,
ROSE K. TRIB.