

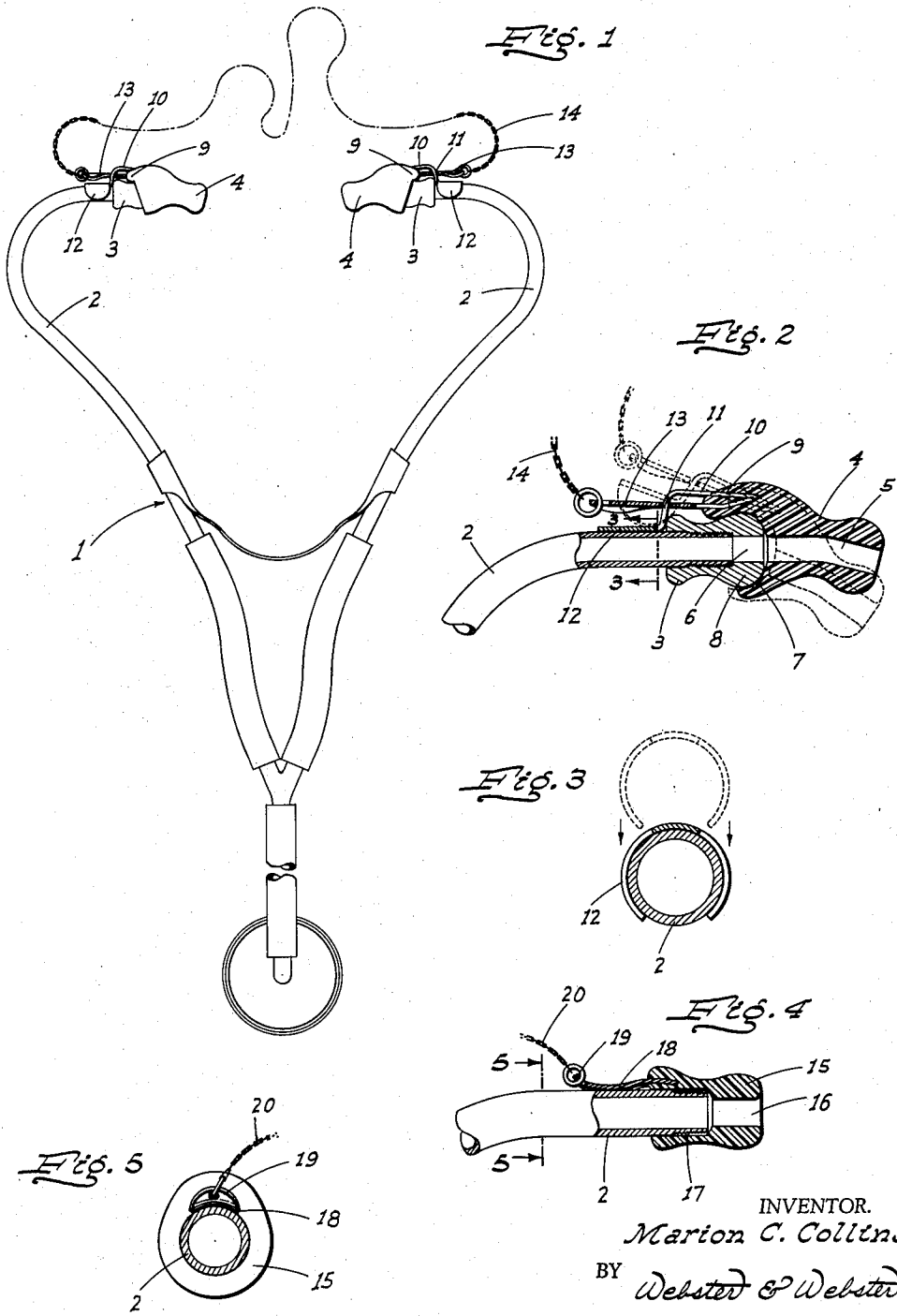
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DETACHABLE EAR PLUGS FOR STETHOSCOPES

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DETACHABLE EAR PLUGS FOR STETHOSCOPES

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3 Claims. (Cl. 181—24)

This invention relates to stethoscopes, such as are universally used by doctors and their nurses. Since—in many instances—the same stethoscope may be used by various persons, unsanitary conditions may sometimes result.

It is therefore the principal object of my invention to provide an ear plug attachment unit adapted to be easily and quickly mounted on and detached from a stethoscope, and since it is intended that each person that is apt to use the stethoscope shall have one of the units for his or her personal use, the possibility of an unsanitary condition of the stethoscope is eliminated.

To ear plugs are of course necessary to provide a complete attachment, and another object of the invention is to permanently connect the plugs together in such a manner that one cannot be lost from the other, and the unit thus provided may be easily carried in a pocket or other relatively small compartment. At the same time the connecting element of the plugs does not interfere with the proper use of the stethoscope when the plugs are applied thereto and the instrument is in use.

It is also an object of the invention to provide detachable ear plugs for stethoscopes which are designed for ease and economy of manufacture.

These objects are accomplished by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claims.

In the drawings:

FIG. 1 is an elevation of a typical stethoscope showing the sanitary ear plug attachment applied thereto.

FIG. 2 is a fragmentary enlarged sectional elevation of one of the sanitary ear plugs as engaged with the ear pieces of the stethoscope.

FIG. 3 is an enlarged cross section on line 3—3 of FIG. 2.

FIG. 4 is an enlarged sectional elevation of a modified form of ear plug as mounted on the stethoscope tube.

FIG. 5 is an enlarged cross section on line 5—5 of FIG. 4.

Referring now more particularly to the drawings and to the characters of reference marked thereon, and at present to FIGS. 1-3, a conventional stethoscope 1 includes a pair of metal ear-piece tubes 2 whose outer ends are disposed in facing relation and carry the tubular ear engaging plugs 3.

The invention comprises a pair of adapter or attachment ear plugs 4 bored, as at 5, to register with the bore 6 of the plugs 3.

At its inner end the bore of each plug 4 is enlarged, as at 7, and shaped to snugly fit over the enlarged rounded outer end 8 of the related plug 3, as shown in FIG. 2. The rear or inner end of plug 4 on top is extended somewhat, as shown at 9, so as to engage the adjacent surface of the plug 3 back of the enlarged rounded end portion 8 thereof and thus prevent the plug 4 being withdrawn by a direct forward pull.

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A metal strip 10 is embedded in the portion 9 of plug 4 (which is preferably formed of a molded plastic) and projects rearwardly therefrom in overlying and spaced relation to the rear portion of plug 3; being then bent down, as at 11, directly behind said plug 3 and being there formed with a downwardly facing spring clip 12 which embraces and frictionally removably engages the adjacent portion of the tube 2.

In this manner the attachment plug 4 is firmly held in place, but can quickly and easily be removed from plug 3 by tipping said plug 4 down sufficiently to disengage the clip 12 from tube 2, as shown in dotted lines in FIG. 2.

Another metal strip 13 is also embedded in portion 9 of plug 4 and projects rearwardly in spaced relation to strip 10 and clip 12 as shown. Strip 13 serves as a means for attachment to one end of a light chain 14 or similar flexible member, the other end of which is attached to the strip 13 of the other plug 4. The length of this chain is sufficient to enable the stethoscope, with the attachment plugs mounted thereon, to be used by the operator without interference from said chain. Said plugs, being permanently tied together by the chain, thus form a unitary attachment.

Upon removing the plugs 3 of the stethoscope from the tubes 2 thereof, attachment plugs 15 as shown in FIGS. 4 and 5 may be used. Each such plug is bored at its forward end portion, as at 16, to register with the bore of the tube 2, and at its rear end is provided with an enlarged bore 17 to snugly engage the outer end portion of the stethoscope tube 2.

A spring metal strip 18 is embedded in the plug 15 and projects from the rear end thereof to frictionally engage the tube 2 back of the plug. The strip 18 may be formed at its rear end with an upturned lip 19 for connection with one end of the chain 20 by which the two plugs of the attachment are tied together.

From the foregoing description it will be readily seen that there has been produced such detachable ear plugs for stethoscopes as will substantially fulfill the objects of the invention, as set forth herein.

While this specification sets forth in detail the present and preferred construction of such ear plugs, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention, as defined by the appended claims.

Having thus described the invention, the following is claimed as new and useful, and upon which Letters Patent are desired:

1. An attachment for a stethoscope, said stethoscope including a pair of rigid opposed tubes, and an ear plug on the outer end of each tube; the attachment comprising a pair of ear plugs having bores disposed to communicate with the first named plugs and of a size to fit on the outer forward end portions thereof, a metal strip secured in and projecting rearwardly from each attachment plug to a point rearwardly of the related first named plug when the attachment plug is in place thereon, and a tube-embracing clip on the rear end of said strip.

2. An attachment, as in claim 1, in which each attachment plug is formed with a rearward extension to follow the contour of and engage a portion of the outer surface

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of the related first named plug rearwardly of the outer end thereof; said strip projecting from said extension.

3. An attachment for a stethoscope, said stethoscope including a pair of rigid opposed tubes, and an ear plug on the outer end of each tube; the attachment comprising a pair of ear plugs having bores disposed to communicate with the first named plugs and of a size to fit on the outer forward end portions thereof, a metal strip secured in and projecting rearwardly from each attachment plug, a deflected portion on the strip intermediate its end disposed so as to be immediately behind and in engagement with the rear end of the related first named plug when said attachment plug is in place thereon, and a tube-embracing clip on the rear end of said strip.

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