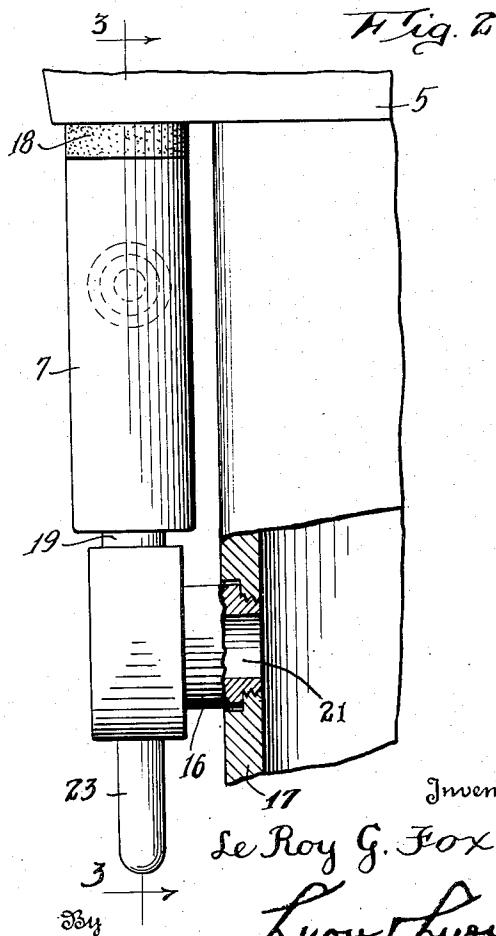
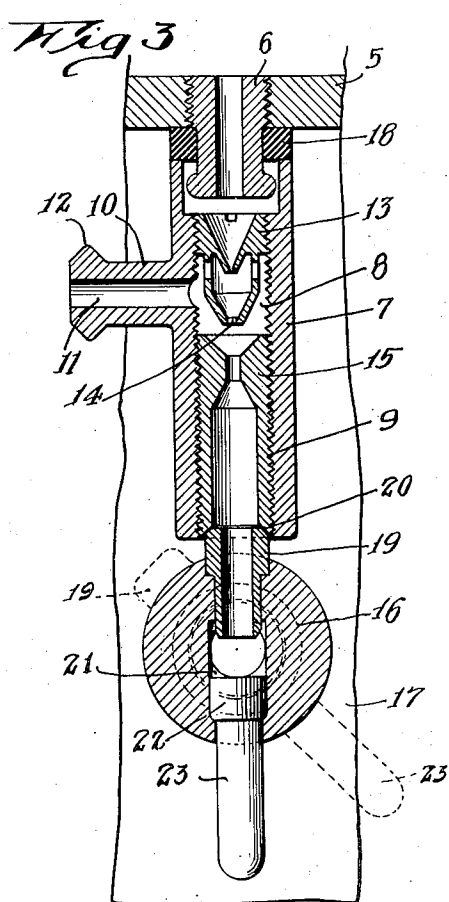
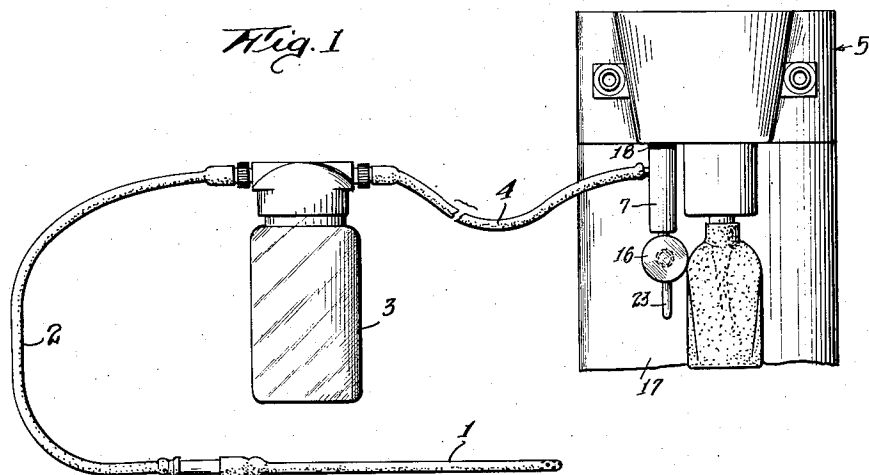


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LE ROY G. FOX
DETACHABLE ASPIRATOR
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DETACHABLE ASPIRATOR

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My invention comprises a detachable aspirator and more specifically, a device for use in connection with a resuscitator inhalator machine. Resuscitator inhalator machines are well known in the art, but in emergency uses often a patient's throat and air passages are plugged so that the resuscitator or inhalator cannot administer oxygen to the patient's lungs and it is therefore necessary to use an aspirator to draw off the congesting matter.

It has been found in the use of aspirators that they often become plugged by the matter being aspirated. As it is often a matter of seconds to save the life of a patient, it is necessary that the aspirator be cleanable in a matter of a few seconds so that it can be put back to use on the same patient.

It is therefore the purpose of my invention to provide a detachable aspirator which can be applied to the usual resuscitator machine to remove the congesting matter in a patient's throat.

Another object of my invention is to provide a detachable aspirator which can be cleaned in a matter of seconds.

Other objects and advantages of my invention will be apparent from the following description of the preferred embodiments.

In the drawings:

Figure 1 is an elevational view of my detachable aspirator.

Figure 2 is an enlarged elevational view thereof.

Figure 3 is a sectional view taken on the line 3—3 of Figure 2.

A detachable aspirator constructed in accordance with my invention is adapted to be used in connection with a catheter 1 attached to a flexible tube 2, a settling bottle 3 and a flexible tube 4, and a resuscitator inhalator 5. A resuscitator is used for artificial respiration when the breathing of a person has ceased and the inhalator is used to supply oxygen to a patient who is breathing.

The ordinary resuscitator inhalator has a nipple 6 threaded to it to permit a blast of oxygen to be emitted. Over this nipple 6 I apply my detachable aspirator. This aspirator has a body member 7 having a bore 8 continuously therethrough and the inner walls of the body 7 are threaded as shown at 9.

Extending laterally from the body 7 is a nipple 10 having a bore 11 connecting with the bore 8. Flanges 12 on the nipple 10 provide a means for holding the flexible tube 4 thereon in a sealing condition so that oxygen can pass through the bores 8, 11 and the tube 4 to the settling jar

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3, from the settling jar 3 to the flexible tube 2 to the catheter 1. Threaded into the body 7 is a Venturi jet 13 which is directed to pass the flow of oxygen out of its end 14 into the Venturi tube 15 threaded into the bore 8.

A boss 16 is threadably attached to the column 17 of the resuscitator inhalator 5 and has a passage 21 connecting the interior of the resuscitator column 17 and the Venturi tube 15.

A rubber washer 18 is ordinarily supplied upon the resuscitator inhalator surrounding the nipple 6. The body 7 passes over the end of the nipple 6 and engages the rubber washer 18 to make an air-tight seal. The body 7 is held in position against the rubber washer 18 by a tube 19 engaging the tapered shoulder 20 of the Venturi tube 15 and held in position in the passage 21 in the boss 16.

In the operation of my device, when it is desired to aspirate a patient's lungs, the catheter 1 is placed in the throat of the patient and oxygen blown from the resuscitator inhalator through the nipple 6, through the Venturi jet 13 into the Venturi tube 15, through the tube 19, passage 21 and into the column 17 where it is disbursed to the atmosphere. The passage of oxygen through this system will suck material through the nipple 10, the flexible tubes 2 and 4, settling jar 3 and catheter 1 from the patient's throat or lungs. However, any solid materials will settle in the settling jar 3, but often the settling jar 3 will fill and then material will be drawn into the Venturi tube. Also small particles that are too light to settle in the settling jar 3 will pass into the Venturi tube and plug up the Venturi tube 15. As the operator of my aspirator often has a matter of seconds to work upon a patient, if the aspirator becomes plugged it must be cleaned immediately. To do this the boss 16 is rotated on its threads by pressing upon the extension 23 of the plunger 22. When this is done the entire aspirator is snapped off from the nipple 6 and can be immediately cleaned by holding the opposite end against the jet of air from the nipple 6, or cleaned in any other manner, and snapped back into position, restoring the boss 16 to its original position. However, if there is an obstruction in the tube 4, or catheter 1, the catheter must be quickly withdrawn from the patient's throat and by moving the extension 23 upwardly in the boss 16 the plunger 22 will close the end of the tube 19, blocking the flow of oxygen through the Venturi tube 15 and forcing same out through the nipple 10, the flexible tubes, etc., and blast any material lodged in the

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line out through the catheter. Release of the plunger 22 will immediately restore the proper circulation and permit the catheter to be reinserted and the aspirator returned to its normal operation.

While I have described the preferred embodiments of my invention, I do not wish to be limited to any of the details herein set forth, but my invention is of the full scope of the appended claims.

I claim:

1. A detachable aspirator adapted to be attached to a device for supplying oxygen, said oxygen supplying device having a supporting column and a nipple adjacent said supporting column, through which nipple oxygen is ported from said oxygen supplying device, comprising: a body having an opening for the reception of the nipple on said oxygen supplying device and a sealing member to seal said body against said oxygen supplying device, a Venturi jet threadably mounted therein, a Venturi tube threadably mounted in said body and a nipple adjacent said jet, a boss attachable to the supporting column of said oxygen supplying device and rotatable thereon, means for porting the discharge from said Venturi tube through said boss into said column, said means comprising a passage through said boss, and a tube inserted in said passage and engaging said Venturi tube, said boss holding said tube against the end of said Venturi tube and said body against said sealing member.

2. A detachable aspirator adapted to be attached to a device for supplying oxygen, said oxygen supplying device having a supporting column and a nipple adjacent said supporting column, through which nipple oxygen is ported from said oxygen supplying device, comprising: a body having an opening for the reception of the nipple on said oxygen supplying device and a sealing member to seal said body against said oxygen supplying device, a Venturi jet threadably mounted therein, a Venturi tube threadably mounted in said body and a nipple adjacent said jet, a boss attachable to the supporting column of said oxygen supplying device and rotatable thereon, means for porting the discharge from said Venturi tube through said boss into said column, said means comprising a passage through said boss, a tube inserted in said passage and engaging said Venturi tube, said boss holding said tube against the end of said Venturi tube and said body against said sealing member, and a plunger adapted to move in said body to seal said tube.

3. A detachable aspirator adapted to be attached to a device for supplying oxygen, said

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oxygen supplying device having a supporting column and a nipple adjacent said supporting column, through which nipple oxygen is ported from said oxygen supplying device, comprising:

5 a body having an opening for the reception of the nipple on said oxygen supplying device and a sealing member to seal said body against said oxygen supplying device, a Venturi jet mounted therein, a Venturi tube mounted in said body and a nipple adjacent said jet, a boss attachable to the supporting column of said oxygen supplying device and rotatable thereon, means for porting the discharge from said Venturi tube through said boss into said column, said means comprising a passage through said boss, and a tube inserted in said passage and engaging said Venturi tube, said boss holding said tube against the end of said Venturi tube and said body against said sealing member.

20 4. A detachable aspirator adapted to be attached to a device for supplying oxygen, said oxygen supplying device having a supporting column and a nipple adjacent said supporting column, through which nipple oxygen is ported from said oxygen supplying device, comprising: a body having an opening for the reception of the nipple on said oxygen supplying device and a sealing member to seal said body against said oxygen supplying device, a Venturi jet mounted therein, a Venturi tube mounted in said body and a nipple adjacent said jet, a boss attachable to the supporting column of said oxygen supplying device and rotatable thereon, means for porting the discharge from said Venturi tube through said boss into said column, said means comprising a passage through said boss, a tube inserted in said passage and engaging said Venturi tube, said boss holding said tube against the end of said Venturi tube and said body against said sealing member, and a plunger adapted to move in said body to seal said tube.

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REFERENCES CITED

45 The following references are of record in the file of this patent:

UNITED STATES PATENTS

	Number	Name	Date
50	1,155,147	Gray	Sept. 28, 1915
	1,430,303	Hartman	Sept. 26, 1922
	1,606,492	Ackerman	Nov. 9, 1926
	2,080,957	Barnett	May 18, 1937
	2,243,695	Connell	May 27, 1941
55	2,268,172	Sinnett	Dec. 30, 1941
	2,376,348	Fox	May 22, 1945
	2,408,136	Fox	Sept. 24, 1946