of the human lungs. In addition, the manikin provides an anatomical simulation of the upper portion of the human elementary canal including the pharynx module structure **5** and esophagus model structure **9** with a modeling of the lower esophageal sphincter in the form of the pressure actuated check valve **12**. The pressure activated check valve **12** opens when gas pressure differential between an upstream and a downstream portion of the esophageal model structure **9** exceeds the selective threshold pressure differential For example, a pressure differential of 15 cm. H_2O is considered average to imitate the lower esophageal sphincter of the average adult human, and a preferred embodiment includes variation between 10–20 cm H_2O.

The lung modeling structure includes means to measure the lung gas volume by capturing and measuring the tidal volume of gas delivered to the lung model by the user. The means to measure the lung gas volume include the one-way check valve **15** to capture the gas delivered and gas detection and measuring means such as a vane type respirometer **18**. Other means of measuring the volume of gas are well known to those skilled in the art and can include a flow transducer and a pressure transducer.

The human lower esophageal sphincter is modeled by means that measure the gas volume delivered to the stomach such as respirometer **13** and pressure activated one-way check valve **12** which is calibrated to open at the selective pressure differential to mimic human sphincter resistance. The normal adult sphincter resistance is 15 cm. H_2O however it may be preferable to provide a variable pressure resistance between 10 and 20 cm H_2O in order to provide a clear demonstration to the user of the effect.

Although the above description and accompanying drawings relate to a specific preferred embodiment as presently contemplated by the inventors, it will be understood that the invention in its broad aspect includes mechanical and functional equivalents of the elements described and illustrated.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A ventilation training analyzer manikin, for providing a quantitative measurement of the relative proportions of breathable gas volume delivered to a patient's lungs and patient's stomach during ventilation attempts by a user, the manikin comprising:

an anatomical simulation of a human respiratory tract including a pharynx model structure, a larynx model structure; and lung modelling means for mimicking the physiological attributes of a human bronchia and lungs;

an anatomical simulation of an upper portion of a human alimentary canal including said pharynx model structure and an esophagus model structure with lower esophageal sphincter modelling means for mimicking the physiological attributes of a human lower esophageal sphincter to open when gas pressure differential between an upstream and a downstream portion of the esophageal model structure exceeds a selected threshold pressure differential; and wherein:

the lung modelling means including lung gas volume measuring means for capturing and measuring the tidal volume of gas delivered to the lung modelling means by the user; and

the lower esophageal sphincter modelling means including stomach gas volume measuring means for capturing and measuring the tidal volume of gas delivered to the lower esophageal sphincter modelling means by the user.

2. A ventilation training analyzer manikin according to claim **1** wherein the lung gas volume measuring means includes a one-way check valve and gas detection means selected from the group consisting of: a vane type respirometer; a flow transducer; and a pressure transducer.

3. A ventilation training analyzer manikin according to claim **2** wherein the lung gas volume measuring means includes at least one flexible inflatable lung bag downstream of the one-way check valve.

4. A ventilation training analyzer manikin according to claim **3** wherein the lung bag includes lung compliance bands about the bag.

5. A ventilation training analyzer manikin according to claim **3** wherein the lung bag includes resilient foam inserts housed within the bag.

6. A ventilation training analyzer manikin according to claim **3** including two lung bags disposed in an orientation visible to the user.

7. A ventilation training analyzer manikin according to claim **1** wherein the lower esophageal sphincter modelling means includes a one-way check valve calibrated to open at said selected threshold pressure differential and gas detection means selected from the group consisting of: a vane type respirometer; a flow transducer; and a pressure transducer.

8. A ventilation training analyzer manikin according to claim **7** wherein the selected pressure differential is in the range of 10–20 cm H_2O.

9. A ventilation training analyzer manikin according to claim **8** wherein the selected pressure differential is about 15 cm H_2O.

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