

A new or improved appliance for use with animals to assist or improve their breathing / [Joseph Gabriel].

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PROVISIONAL SPECIFICATION.

**A New or Improved Appliance for use with Animals to Assist
or Improve their Breathing.**

I, JOSEPH GABRIEL, of 61 George Street, Manchester, in the County of Lancaster, Merchant, do hereby declare the nature of this invention to be as follows;

This invention relates to a new or improved appliance for use with or to be worn by animals, human or otherwise, to assist or improve their breathing.

Such an appliance is adapted to be worn by or be attached to the animal and is provided with parts or members by which the nostrils of the animal concerned are distended or held open to a greater extent than is normal, in order to enlarge the air passage or passages, and thus permit freer breathing and the admission of a larger volume of air to the lungs.

An appliance constructed according to this invention may be of many or various forms according to the animal or part of the animal which it is to be applied.

As an example, and for human use, a bridge piece or a clip may be applied to the nose and spring arms attached to such bridge piece engage with the nostrils for the purpose indicated.

Or thin tubular lining pieces may be inserted in the nostrils of larger size than the nostrils are normally, or wedges or the like may be employed.

Dated this 11th day of February A.D. 1904.

W. E. HEYS & SON,
Agents for the Applicant.

COMPLETE SPECIFICATION.

**A New or Improved Appliance for use with Animals to Assist
or Improve their Breathing.**

I, JOSEPH GABRIEL, of 61 George Street, Manchester, in the County of Lancaster, Merchant, do hereby declare the nature of this invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement.

This invention relates to a new or improved appliance for use with or to be worn by animals, human or otherwise, to assist or improve their breathing.

Amongst other uses an appliance constructed to embody my improvements may be worn during exercise, during sleep, or during an operation when an anaesthetic has been administered or is being administered.

Such an appliance is adapted to be worn by or to be attached to the animal and is provided with parts or members by which the nostrils or the front nasal apertures, hereinafter referred to as the nostrils, of the animal concerned are distended or held open to a greater extent than is normal or than can be easily

[Price 8d.]

Improved Appliance for use with Animals to Assist or Improve their Breathing.

maintained by the muscles unaided, in order to enlarge the air passage or passages, and thus permit freer breathing and the admission of a larger volume of air to the lungs.

An appliance constructed according to this invention may be of many or various forms according to the animal or part of the animal to which it is to be applied, and the accompanying drawings illustrate different types of apparatus or appliance for human use, but it is to be understood that they are types only and by no means exhaust the forms in which the appliance may be made, as the form may be varied or modified as desired.

Figure 1 shows an appliance adapted to distend the human nostrils, and illustrates the mode of its application, the nose being indicated by the dotted lines *a*. This appliance consists essentially of two parts hinged together at *b* and each part being provided or formed with two limbs *c*, *c'* and *d*, *d'*. A spring *e* is combined with or attached to the members in such a manner that its pull causes the limbs *c'*, *d'* to approach each other and the two limbs *c*, *d* to move farther apart. By squeezing together the limbs *c*, *d* the limbs *c'*, *d'* are separated and the appliance can easily be introduced into the nostrils. When the pressure on the outer limbs *c*, *d* is released the spring *e* causes the two inner limbs *c'*, *d'* to approach each other and grip the cartilage or other part *f*, and the outer limbs to recede and to press against the inner surfaces of the nostrils *g* and distend them.

Figure 2 shows a type of appliance which is secured to the nose above the nostrils and externally, after the manner of pince-nez. *h* is a spring bow adapted to grip upon the bridge of the nose in a well known manner. Attached to this bow are the spring arms *k*, *k'* the ends of which are normally wider apart than the width to which the nostrils can be distended. By compressing the arms or limbs *k*, *k'* or squeezing them together the ends *m*, *m'* which are returned for the purpose, may be introduced into the nostrils. When the arms are released the ends *m*, *m'* engage with the inner surfaces of the nostrils *g* and distend them.

Figures 3 and 4 illustrate forms of appliance which are held in place in the nose simply by the engagement of the distending arms or equivalent parts.

In Figure 3 is shown such a device applied to the nose from underneath. It consists of a spring bow *l* the ends of which require compressing or squeezing together to enable them to be inserted in the nose. Upon being released the ends *m*, *m'* of the spring bow move outwards and distend the nostrils *g* as before.

The device shown in Figure 4 is similar to that shown in Figure 3 but is modified so as to be applied to the nose from above. For this purpose the ends of the arms *m*, *m'* are re-turned, as are the ends of the arms shown in Figure 2.

As before *l* is a spring bow the tendency of which is to maintain the ends *m*, *m'* at a distance apart greater than the distance to which the nostrils can be conveniently distended.

As previously explained other appliances to effect the same purpose may be similarly employed, and when such attachment is necessary may be differently attached to the nose or person of the wearer than is described and illustrated. As examples, thin lining tubes may be inserted in the nostrils of a size larger than the normal size of the nostrils, or wedges, struts, or the like parts adapted to extend or increase the area of opening of the nostrils may be employed.

The appliances herein described may be constructed of any suitable metal or other material, and the parts which engage with the nostrils or with the nose may be suitably shaped or be lined or padded with elastic or other material so as to do no injury.

In the types of devices described and shown arms or equivalents are represented which engage equally with both nostrils but such an appliance may be used or be constructed so as to be capable of use with one nostril only.

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Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed I declare that what I claim is:—

1. An appliance for distending the nostrils or a nostril of a human or other
5 animal, formed and disposed substantially as hereinbefore described.
2. An appliance for distending the nostrils of a human or other animal, comprising a spring controlled part or parts the ends of which are adapted to engage with the inner surfaces of the nostrils, substantially as and in the manner hereinbefore described.
- 10 3. An appliance for distending the nostrils of a human or other animal, comprising a part adapted to grip the nose or other part of the animal, a part or parts adapted to engage with the inner surfaces of the nostrils, and a spring for controlling or operating such parts, substantially as and in the manner hereinbefore described.
- 15 4. An appliance for distending the nostrils of a human being, constructed and arranged substantially as hereinbefore described with reference to Figure 1 of the drawings.
5. An appliance for distending the nostrils of a human being, constructed and arranged substantially as hereinbefore described with reference to Figure 2
20 of the drawings.
6. An appliance for distending the nostrils of a human being, constructed and arranged substantially as hereinbefore described with reference to Figure 3 of the drawings.
7. An appliance for distending the nostrils of a human being, constructed
25 and arranged substantially as hereinbefore described with reference to Figure 4 of the drawings.

Dated this 1st. day of July 1904.

W. E. HEYS & SON,
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Deansgate Arcade 51, Manchester.

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Received of the Treasurer of the University of Toronto
the sum of \$100.00 for the year ending 1911-12

Witness my hand and seal this 11th day of December 1911

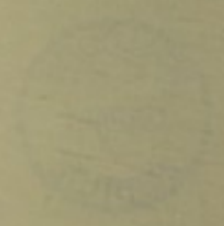
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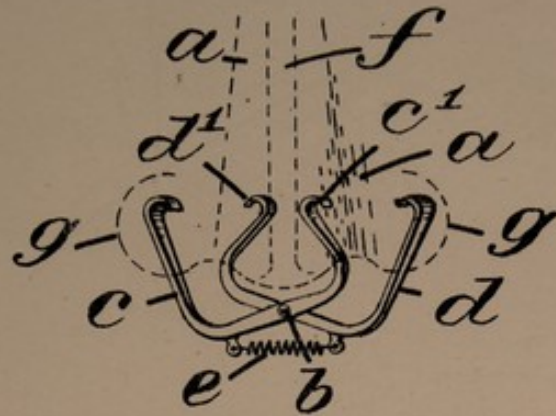


Fig. 1.

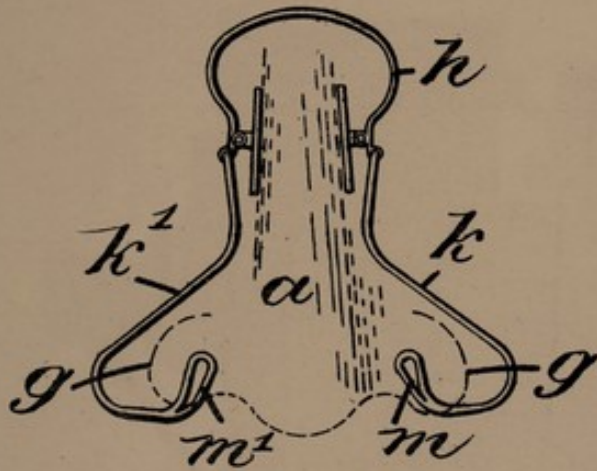


Fig. 2.

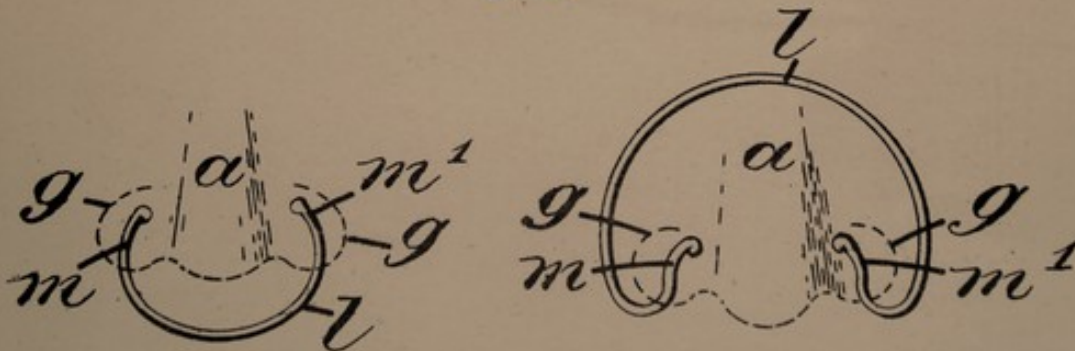


Fig. 3.

Fig. 4.

[This Drawing is a reproduction of the Original on a reduced scale.]

