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# (54) Facemask-inbuilt medical hood structure

(57) A medical hood structure differentiated by in-built with a facemask, specifically designed to completely isolate the wearer's head from the outside environment, forming an all exclusive barrier when fitted to the wearer's clothing. The medical hood structure includes a hood-body (3) for completely covering the head and a facemask (4) combined onto the hood-body (3). The hood-body (3) includes a mask-opening (311) corresponding to the mouth and nose region and a wear-opening (321) at the underside thereof. Furthermore, a rim of the wear-opening is fitted with a hood-girdle (322) for fitting to the clothing, the facemask (4) is disposed at the mask-opening (311) of the hood-body (3) and sealing it, and a fitting-loop (41) is disposed at the two ends of the facemask, exposed on hood-body hanging outward, and to be loop around the ears or onto the head.

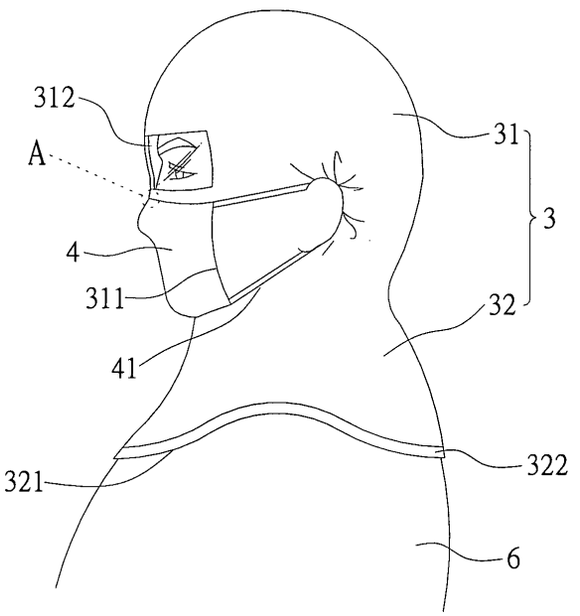


FIG. 2

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## Description

### BACKGROUND OF THE INVENTION

#### 1. Field of the Invention

**[0001]** The present invention is a medical hood structure unique in being inbuilt with a facemask, which more particularly, is a medical hood structure that is combined with a facemask, which when further complemented with clothing, can achieve complete isolation of the wearer's head from the environment.

#### 2. Description of Rotated Art

**[0002]** Infectious diseases transmitted through air-borne infection, short-distance air-borne infection, or short-distance respiratory droplets are numerous. One such disease is influenza transmitted short-distance air-borne or through respiratory droplets. After two people had conversation at close range, one infected with influenza is likely to have transmitted the virus to the other. A facemask is thus needed to guard against infections like such.

**[0003]** However, for medical personnel working in hospitals where infectious sources are omnipresent, wearing only a facemask proves to be insufficient, as our hair can collect large quantities of microbes and germs. Therefore, further protection is necessary.

**[0004]** Referring to Fig.1, the shown are two conventional articles worn by hospital staff to enhance protection. Other than the previously mentioned facemask 2, there is also the medical cap 1 which fully envelops a wearer's hair, thereby preventing microbes and germs from being collected by the wearer's hair. The facemask 2 is worn by slipping the two earloops 21 behind the ears thus covering the mouth and nose, and the medical cap 1 completely envelops the wearer's hair by using a cap-girdle 11 to prevent hair from slipping out from underneath the cap.

**[0005]** However, other than the mouth, nose, and hair, there are also the eyes, ears, eyebrows, and even the neck, which are all also likely places where microbes and germs can enter into the human body, or be collected in the surrounding, thus this aforesaid conventional manner of wearing only the medical cap 1 and the facemask 2 does not guarantee protection against nosocomial infection. Take for example the Severe Acute Respiratory Syndrome (SARS) that emerged beginning of 2003. Since the SARS virus can survive long periods in the air, and even more so when it is traveling on an object, the infection paths thereof are more extensive. The conventional manner of wearing only the medical cap 1 and the facemask 2 therefore is insufficient in preventing infections of such type.

### SUMMARY OF THE INVENTION

**[0006]** It is the primary objective of the present invention to provide a facemask-inbuilt medical hood structure, in which the facemask is combined with the hood, and a wear-opening of the hood can fit to the clothing, thereby fully enclosing the head to provide full protection and complete isolation away from microbes and germs.

**[0007]** It is another objective of the present invention to provide a facemask-inbuilt medical hood structure, in which a flexible hood is provided, so that it is convenient to attach fitting-loops at two ends of the facemask to loop around the ears or around the head.

**[0008]** It is a further objective of the present invention to provide a facemask-inbuilt medical hood structure, in which a flexible hood is provided, so that it is convenient for glasses to be worn over the hood.

**[0009]** To achieve the objectives described above, this invention provides a facemask-inbuilt medical hood structure, wherein the medical hood structure includes a hood-body having a mask-opening corresponding to the mouth, and nose region of a person, a wear-opening at the underside thereof, and facemask disposed over and sealing up the mask-opening of the hood-body.

**[0010]** Further, the rims of the wear-opening is fitted with a hood-girdle that attaches to clothing, and respective fitting-loops are disposed at two ends of the facemask, and exposed an the hood-body.

### BRIEF DESCRIPTION OF THE DRAWINGS

**[0011]** The foregoing aspects and many of the attendant advantages of this invention will become more readily appreciated as the same becomes better understood by reference with the following detailed description, taken in conjunction with the accompanying drawings, wherein:

Fig. 1 is a front view of a conventional medical cap and a facemask being worn by hospital staff;

Fig. 2 is a side view of a medical hood in accordance with the present invention being worn;

Fig. 2A is a partially cross-sectional view of a medical hood in accordance with the present invention, in the portion A of Fig. 2;

Fig. 3 is a front view of a medical hood in accordance with the present invention being worn;

Fig. 4 is a side view of a medical hood in accordance with the present invention being worn with a further pair of glasses; and

Fig. 5 is a side view of another embodiment of the medical hood in accordance with the present invention being worn.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

**[0012]** In referring to Figs. 2, 3 and 4, a facemask-inbuilt medical hood structure is provided in this invention. It includes a hood-body 3 that entirely covers the head, and a facemask 4 that is combined to the hood-body 3.

**[0013]** The hood-body 3, made of a flexible material, includes a hooded hood-helm portion 31 for covering the head and a hood-skirt portion 32 that integrally extending downward from the hood-helm portion 31. The hood-helm portion 31 has a mask-opening 311, corresponding to the mouth and nose region, receiving the facemask 4. The underside of the hood-skirt portion 32 has a wear-opening 321, and the rim of the wear-opening 321 is fitted with a hood girdle 322. Through the wear-opening 321, the head can enter and be covered by the hood-body 3, and the hood-girdle 322 of the wear-opening 321 can tighten to fit to clothing 6.

**[0014]** The facemask 4 seals up the mask-opening 311 of hood-body 3. As shown in Fig. 2A, a joining area 5 is disposed at the edges of facemask 4 and an the inner face of the hood-body 3, thereby the mask-opening 311 is completely sealed up by the facemask 4. Furthermore, respective fitting-loops 41 are disposed at the two ends of the facemask 4 and are exposed an the hood-body 3. The hood body 3 is made of a flexible material. The fitting-loops 41 are hung from the hood-body 3, and shown looped around the ears as with the behind-the-ear fitting-loops 41 in Figs. 2, 3 and 4, or shown looped onto the head as with the over-the-head fitting-loops 41 in Fig. 5.

**[0015]** The hood-body 3 can be made of a flexible material that can be diaphanous or transparent, such as limpid membrane, which someone wearing the hood of this invention can view through the hood-body 3. Alternatively, the hood-body 3 can be made of opaque flexible material, which in this case a viewable portion 312 by which light can pass through and positioned corresponding to the wearer's eyes is necessary, and it can be formed in the same manner as sealing up the opening 311 with the facemask 4.

**[0016]** In addition to fitting-loops 41 can conveniently hung outwardly from hood-body 3, and since the hood-body 3 is made of a flexible material, a pair of glasses 7 can be conveniently worn on the hood-body 3, as shown in Fig. 4.Alternatively, the pair of glasses 7 can be put on before the hood of this invention is put on.

**[0017]** In Fig. 3 the ends of the hood-skirt portion 32 extends to the shoulders, or below the shoulders to simultaneously cover the neck. Moreover, the ends of the wear-opening 321 of hood-skirt portion 32 can be tightly fitted to the clothing 6, such as isolation gowns, protective suits, or plain cloth, via the hood-girdle 322.

**[0018]** Again, referring to Fig. 2A, the hood-body 3 of this invention can be either a single-layered hood or a double-layered hood. The double-layered hood construction includes an inner layer 302 that comes in direct contact with the human body, and an anti-bacterial outer layer 301 covering over the inner layer 302. The anti-bacterial outer layer 301 is used to shield interior of the inner layer 302 against invasions from microbes and germs, giving better protection to the wearer against microbes and germs.

**[0019]** Consequently, the medical hood structure disclosed in this invention is advantageous in that:

1. The medical hood structure can completely cover the head. The originally unprotected eyes, ears, and eyebrows can all be covered now, and further the user can now breathe through the combined facemask 4. This provides the hospital staff with a more sound and more reliable protection from viruses, bacteria, and foreign substances.

2. Since the medical hood structure extends downward towards or below the shoulders, and the hood-girdle 322 of wear-opening 321 thereof, it can be tightly fitted with the clothing 6 much like isolation gowns, protective suits or ordinary clothing, providing protection also for the neck.

3. Since the hood-body 3 of the medical hood structure is made of a flexible material, it is convenient for fitting-loops 41 of the combined thereon facemask to hung outward from the hood-body 3, around the ears or onto head. Also, hospital staff wearing glasses can wear them on top of the hood-body 3.

4. Because the hood-body 3 of the medical hood structure further includes the inner layer 302 and the anti-bacterial outer layer 301, the anti-bacterial outer layer 301 shields the interior of the inner layer 302 from microbes and germs.

5. The joining area 5 described in this invention combines the facemask 4 to the hood-body 3.

**[0020]** As will be understood by a person skilled in the art, the foregoing preferred embodiment of the present invention are provided for illustrating the present invention rather than limiting the scope of the present invention. It is intended to cover various modifications and similar arrangements included within the spirit and the scope of the appended claims, and the scope of which should be accorded with the broadest interpretation, so as to encompass all such modifications and similar structures.

## Claims

**1.** A facemask-inbuilt medical hood structure, comprising:

a hood-body having a mask-opening corresponding to the mouth and nose region and a wear-opening at the underside thereof; and a facemask provided at said mask-opening of said hood-body, sealing up said mask-opening, wherein the facemask has respective fitting means provided at the two ends thereof and exposed on said hood-body.

**2.** The facemask-inbuilt medical hood structure according to claim 1, wherein the hood-body has a rim at the ends of said wear-opening fitted with a hood-girdle, for a tight fit with the clothing.

**3.** The facemask-inbuilt medical hood structure according to claim 1 or 2, wherein said hood-body further includes a hood-helm portion for covering the head, a hood-skirt portion integrally extending downward from said hood-helm portion, a said mask-opening located at said hood-helm portion, and a said wear-opening located at the underside of said hood-skirt portion.

**4.** The facemask-inbuilt medical hood structure according to claim 3, wherein said hood-skirt portion of said hood-body further extends below the shoulders.

**5.** The facemask-inbuilt medical hood structure according to claim 1 or 2, further includes a joining area disposed at the peripherals of said facemask and its adjacencies on the inner face of said hood-body, through which said facemask combines to said hood-body.

**6.** The facemask-inbuilt medical hood structure according to claim 5, wherein said joining area is an adhesive.

**7.** The facemask-inbuilt medical hood structure according to claim 1 or 2, wherein said hood-body is made of an opaque material and a transparent viewable portion corresponding to the eyes is further disposed thereon.

**8.** The facemask-inbuilt medical hood structure according to claim 1 or 2, wherein said hood-body is made of a flexible material.

**9.** The facemask-inbuilt medical hood structure according to claim 1 or 2, wherein said fitting-loop of said facemask is a behind-the-ear type.

**10.** The facemask-inbuilt medical hood structure according to claim 1 or 2, wherein said fitting-loop of said facemask is an over-the-head type.

**11.** The facemask-inbuilt medical hood structure according to claim 1 or 2, wherein said fitting-loop of said facemask includes a behind-the-ear fitting-loop and an over-the-head fitting-loop.

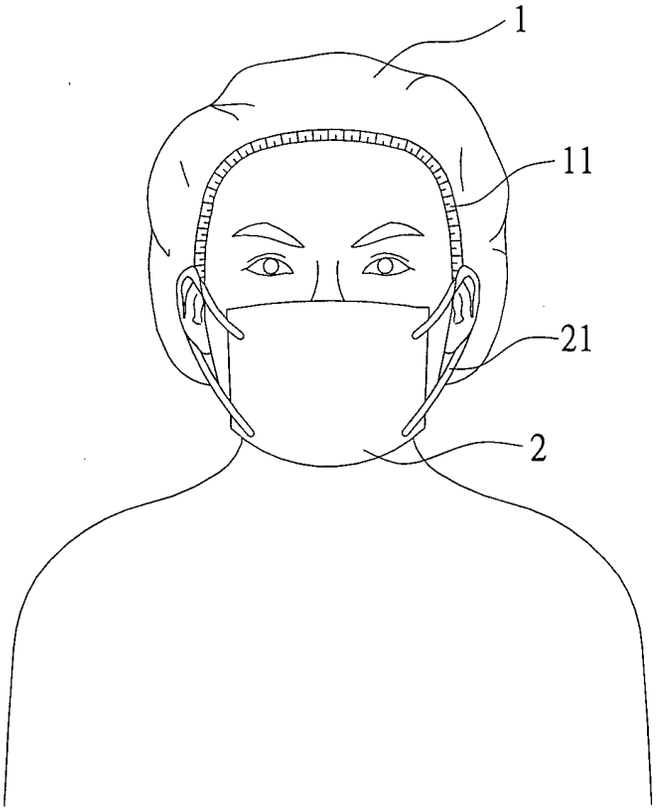


FIG. 1
PRIOR ART

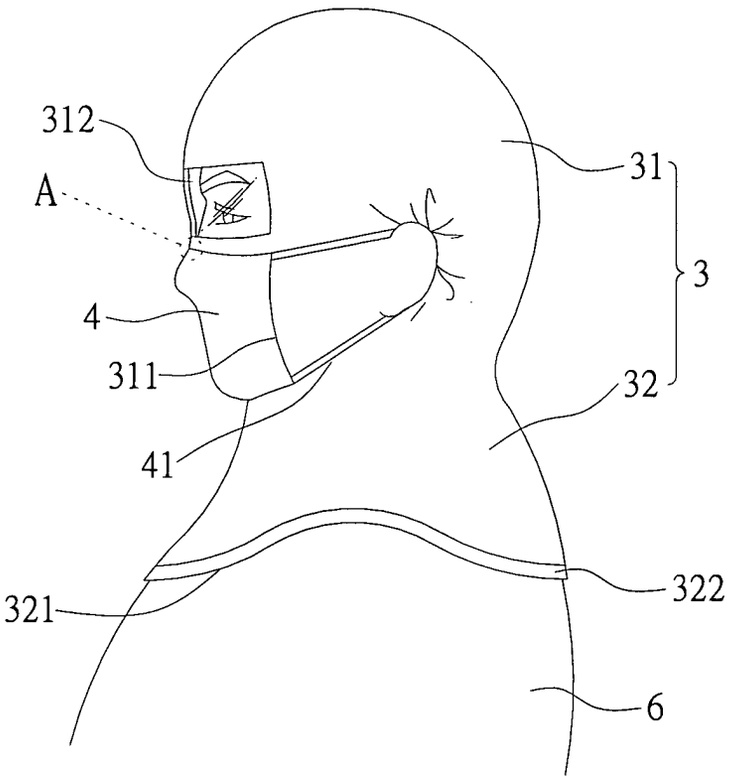


FIG. 2

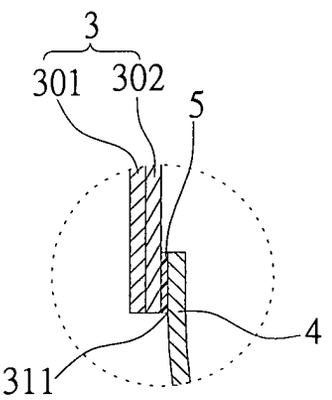


FIG. 2A

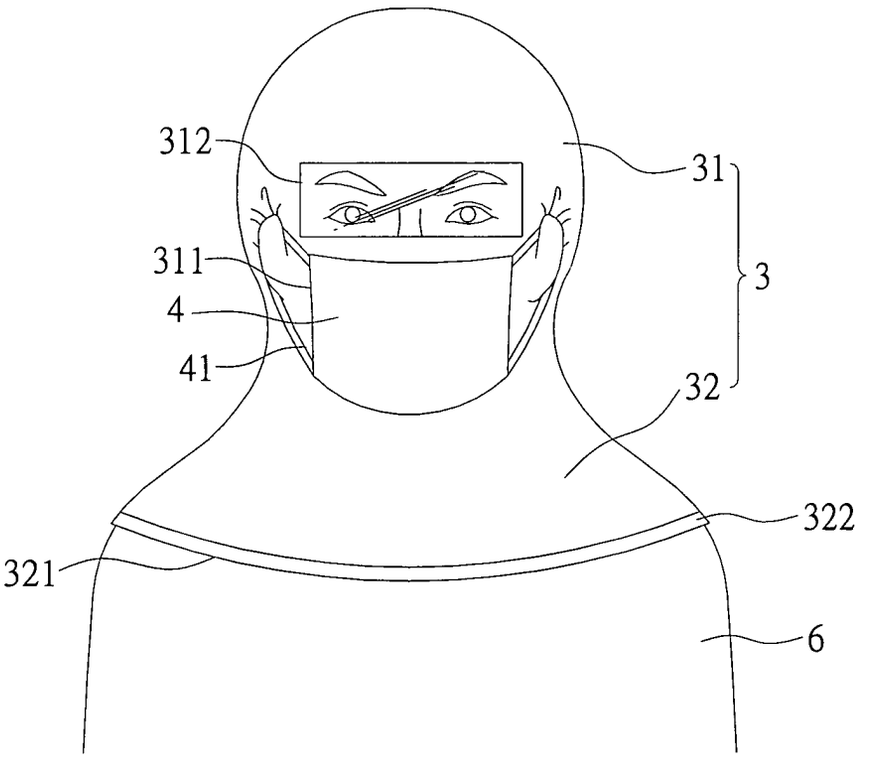


FIG. 3

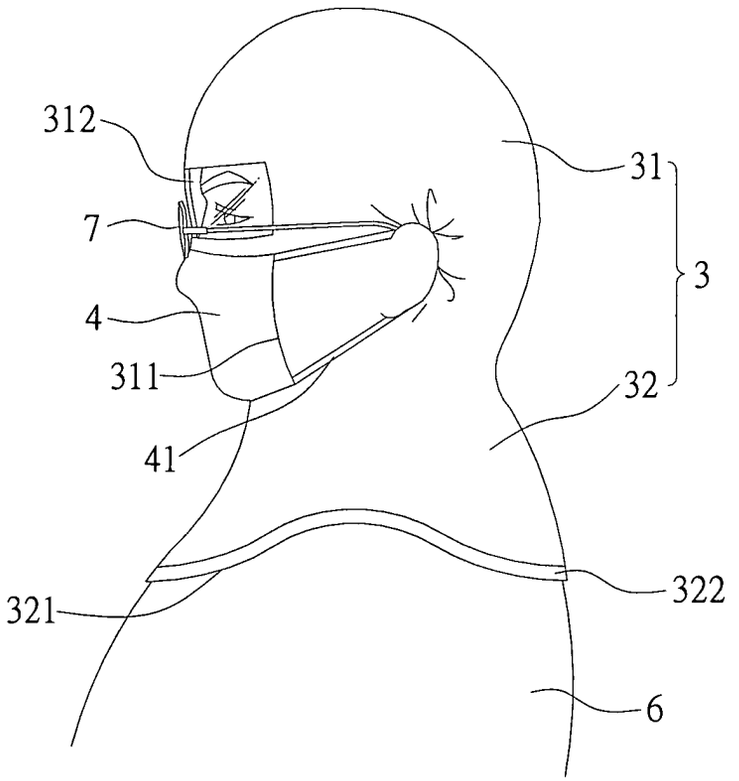


FIG. 4

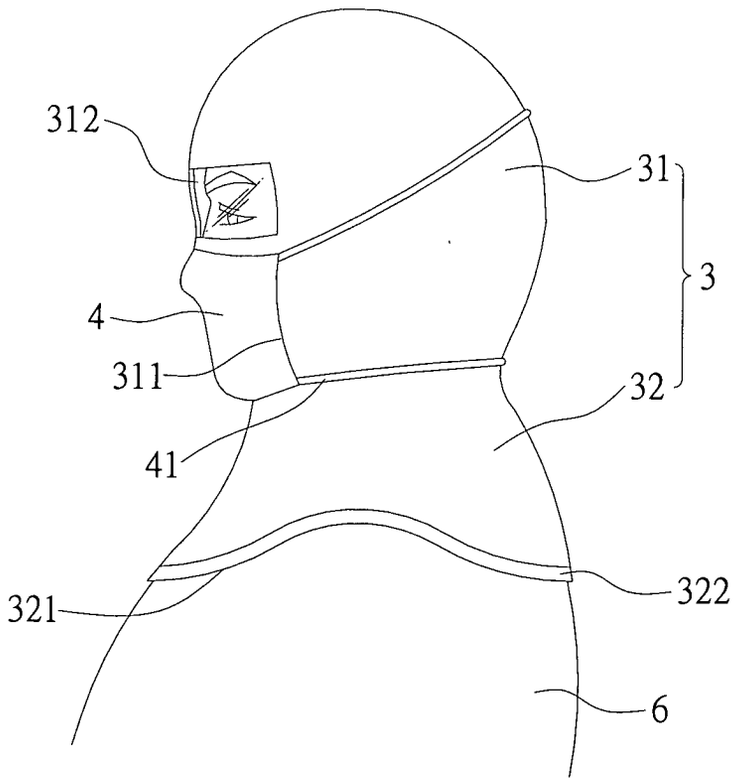


FIG. 5