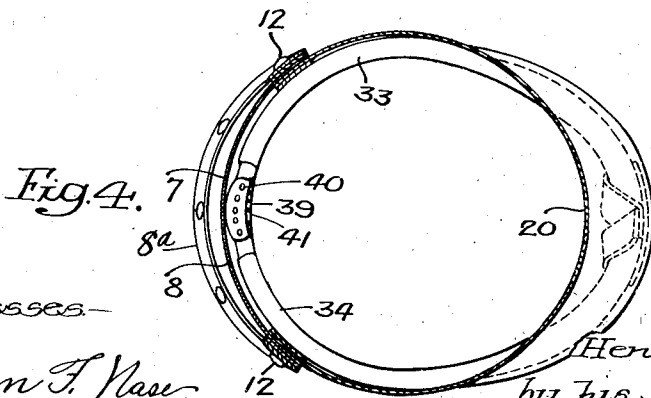
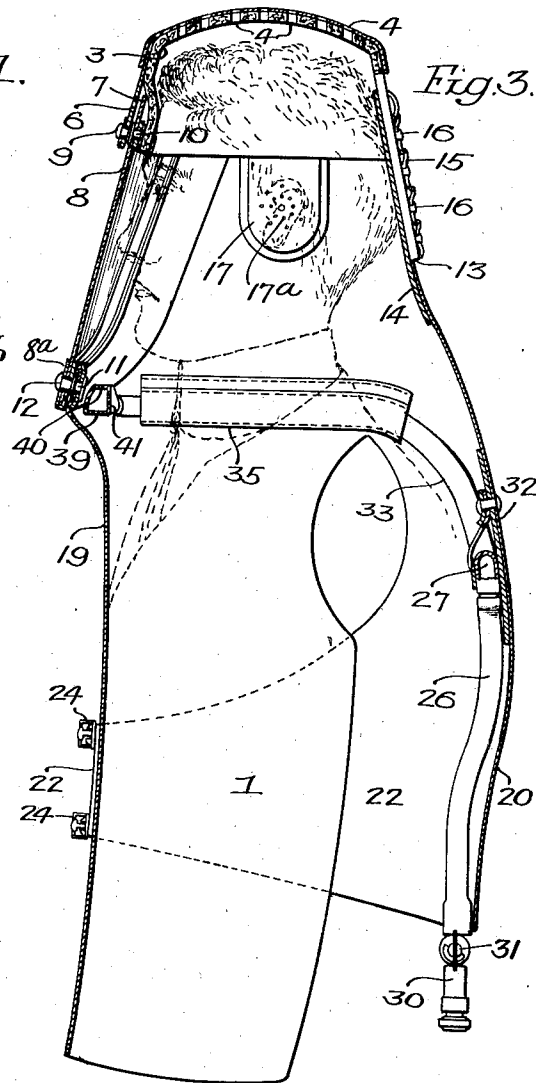
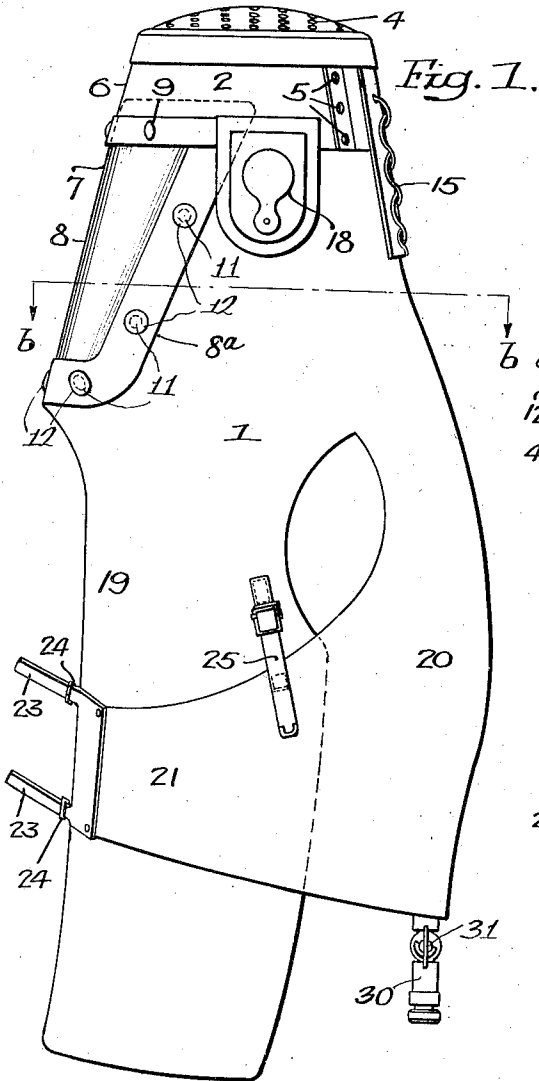


H. G. DINN.
 PROTECTIVE GARMENT.
 APPLICATION FILED NOV. 4, 1912.

1,095,089.

Patented Apr. 28, 1914.

2 SHEETS—SHEET 1.



Witnesses—
 William F. Nass
 Walter A. Bunnora

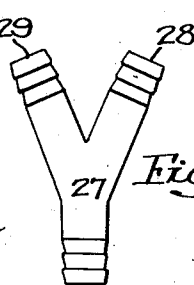
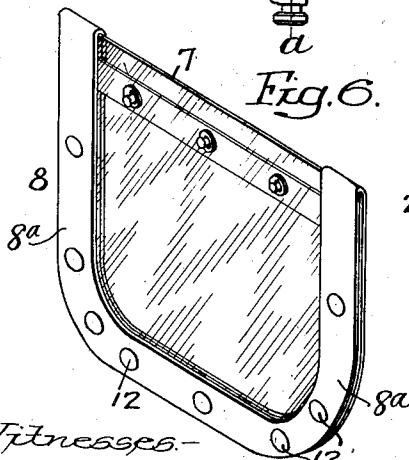
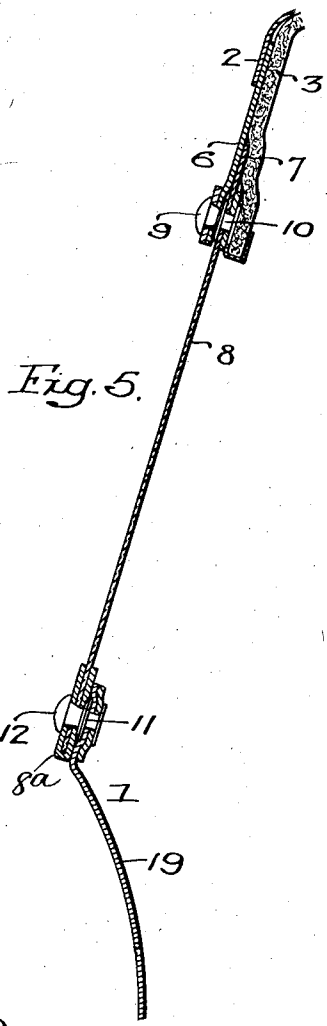
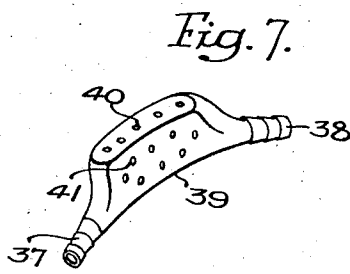
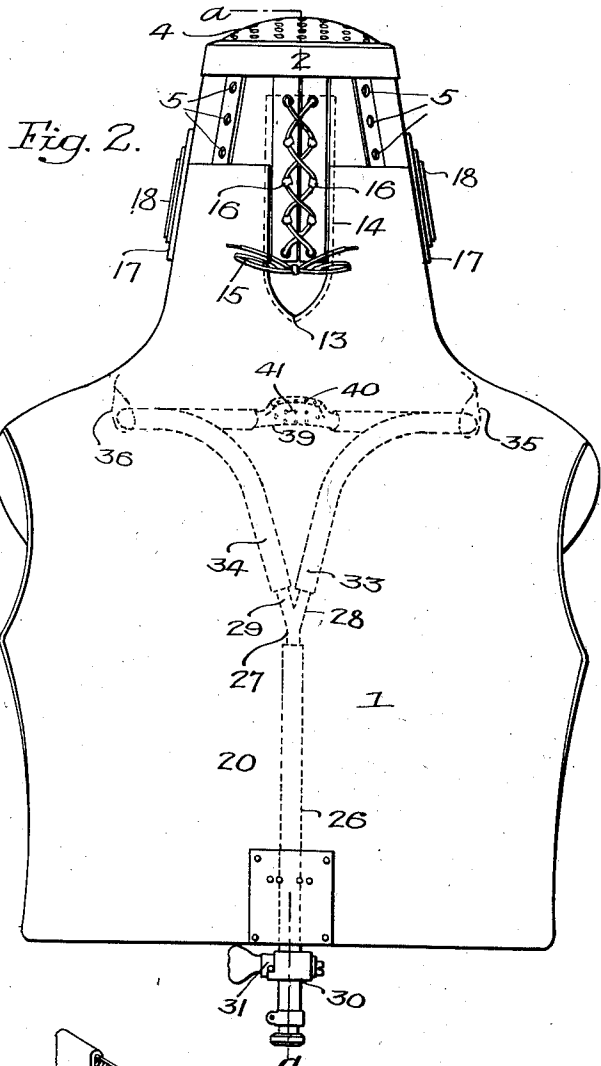
Inventor—
 Henry G. Dinn.
 by his Attorneys—
 Howson & Howson

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2 SHEETS—SHEET 2.



Witnesses—
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UNITED STATES PATENT OFFICE.

HENRY G. DINN, OF PHILADELPHIA, PENNSYLVANIA.

PROTECTIVE GARMENT.

1,095,089.

Specification of Letters Patent. Patented Apr. 28, 1914.

Application filed November 4, 1912. Serial No. 729,437.

To all whom it may concern:

Be it known that I, HENRY G. DINN, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain improvements in protective garments, of which the following is a specification.

My invention consists of a protective garment and is particularly adapted for use by workmen such as painters, plumbers, etc., who are compelled to work in rooms or other places filled with poisonous gases or dusts.

My invention also consists of novel means of supplying fresh air to the inside of the garment and which may be breathed by the workman.

One of the objects of my invention is to provide a garment which will entirely protect the wearer and prevent the inhaling of poisonous vapors or dust.

Another object of my invention is that the garment will be comfortable and allow the wearer a large scope of vision.

A still further object of my invention is to render the garment adjustable to fit workmen of different sizes and to provide an air circulating means which will supply fresh air to the workman to be breathed and cause a transparent portion of the garment through which the workman sees, to be kept free from condensed moisture.

Another object is that the garment may be easily attached or detached and ventilated. Also, that the air supply will be at all times under the control of the wearer of the garment.

These objects and other advantages which will be described hereinafter I attain in the following manner, reference being had to the accompanying drawings in which,

Figure 1, is a side elevation of a garment constructed in accordance with my invention; Fig. 2, is a rear elevation of the garment shown in Fig. 1; Fig. 3, is a sectional elevation taken on the line *a-a* Fig. 2; Fig. 4, is a sectional elevation taken on the line *b-b* Fig. 1; Fig. 5, is an enlarged sectional elevation of a window which I employ in my garment; Fig. 6, is a detail perspective view showing the window detached from the body of the garment; Fig. 7, is a perspective view of a special form of air distributor which I employ; and Fig. 8, is a detail of a forked-air joint which I preferably use.

Referring to the drawings, 1 is the body

of the garment which is preferably made out of canvas or other cloth having a head piece or hat 2 preferably of leather sewed or otherwise secured thereto. This hat is lined with a felt band or lining 3 or other substance which, when contacting with the head will form a seal in the manner hereinafter more fully described. The hat 2 is provided with vent holes 4 and 5 and the space between the front 6 and the felt 3 forms a socket for the insertion of the upper edge 7 of a window or transparent section 8. The front portion 6 of the hat 2 is provided with snap buttons 9 which are arranged to engage snap buttons 10 on the upper edge 7 of the window 8 when the latter is placed between the felt 3 and front 6 as clearly shown in Figs. 3 and 5. The body of the garment below the hat 2 is also provided with snap buttons 11 which are adapted to be engaged by the snap buttons 12 on the flexible frame 8^a of the window 8 as clearly shown in Figs. 1 and 3.

At the rear of the garment the felt 3 is split and extended downwardly to a point 13 and an elastic insert 14 is secured to the inner portion of the garment and is adapted to overlap the split portion of the felt as is shown in Figs. 2 and 3. A lace or drawstring 15 adapted to engage clasps 16 arranged on either side of the split portion of the hat 2 acts as a means whereby the garment may be increased or decreased in size adjacent the hat portion so as to accommodate persons of different sizes. An ear portion 17 having perforations 17^a is provided on each side of the garment so as to allow the wearer to clearly distinguish sounds and to allow the escape of the air from the interior of the head section. These ear portions may be made so as to press firmly against the outer ear. The outer surface of the garment is provided with pivot-arms 18 which may be moved to open the apertures in the ear piece 17, or as shown in Fig. 1 may be allowed to remain closed at the will of the wearer. The lower portion of the garment 1 is so cut as to provide a forward or front body portion which extends downward from the window 8 and ordinarily ends slightly below the waist of the wearer. The rear portion 20 of the body of the garment has extensions 21 and 22 which extend from the back under the arm of the wearer and are provided with straps 23 and buckles 24 respectively by which the

ends 21 and 22 may be drawn tightly around the wearer and cause the garment to snugly fit the body. An auxiliary strap 25 is provided on each side of the garment so as to cause the garment to fit snugly around the arms of the wearer. An air inlet pipe 26 has one end secured to a Y-shaped tube 27 having branches 28 and 29 and has its other end provided with a coupling 30 having a regulating valve 31. The Y-shaped tube 27 is secured against the inner surface of the garment in the present instance by straps 32 and the branches 28 and 29 are fitted within the ends of two pieces of flexible tube 33 and 34 respectively; the latter being supported by cloth bushings 35 and 36 which are secured to the inner face of the garment. The other ends of the flexible tubes 33 and 34 fit respectively over the ends 37 and 38 of an air distributor 39; the latter having two series of perforations 40 and 41, the series 40 being so arranged as to deflect air upward and toward the inner surface of the window 8, while the perforations 41 distribute the air toward the face and body of the wearer.

When the garment is being worn the head of the wearer should properly rest against the inner felt 3 and entirely around the circumference of the felt. This will form a seal and prevent any gases from passing below the line of contact of the person's hat with the felt. However, the head will be kept cool by means of the vents or perforations 4 and 5.

In the use of my invention, if a person has to work within a room for example having poisonous gases therein or other matter which would be injurious, a tube which is attached to an air pump of any description is secured to the coupling 30. The person may then go in the room and may regulate the amount of air necessary to inhale while in there by operating the valve 31. The force of the incoming fresh air can be made of sufficient strength if necessary to escape through the perforations 17^a. In this way a fresh supply of air may be always kept within the garment and the poisonous gases or the like prevented from passing into the inhaling space of the garment.

By having the window 8 extending to a point below the chin of the wearer a workman is able to see at a wide angle. Also, by having the window attached by means of snap buttons it may be readily detached and attached; the upper portion 7 forming a seal with the hat portion.

By making the inlet tube 33 and 34 branched, the same pass over and conform to the contour of the shoulders of the wearer and insure a proper distribution of the air through the distributor 39.

The window or transparent section 8 may be made of any suitable substance but I

preferably make the same of isinglass or celluloid so as to render the same flexible and permit it being bent to the proper contour so as to fit between the front section 6 of the hat 2 and the felt lining or seal 3. Also, by having the window 8 made of a flexible material the workman can admit atmospheric air without removing the entire window 8. The tubes 26 and 33 can be made of materials having variable degrees of flexibility but should be sufficiently rigid so as not to be flattened when under the pressure of the tightening means of the garment.

I claim:—

1. A protective garment comprising a portion for inclosing the head of a person; a body portion extending downwardly from the head portion, said body portion being divided into two sections throughout a portion of its length and having overlapped portions forming armholes; adjustable means for securing the overlapped portions to the body of the wearer; a detachable transparent section extending substantially the entire length and in front of the face of the wearer; and means for conveying air to the interior of the garment.

2. A protective garment comprising an adjustable head section; a body section extending downwardly from the head section, said body section being divided into two sections, one section forming the front body portion of the garment, the other of said sections forming the back of the garment and having extensions for overlapping the front portion; means for securing the said extensions around the front portions of the garment; a transparent section detachably secured adjacent the face of the wearer and means for supplying air to the inside of the garment.

3. A protective garment comprising a head section; a body section extending downwardly from the head section, said body section being divided into two sections throughout a portion of its length, one of said sections forming the front body portion of the garment, the other of said sections forming the back of the garment, one of said sections having extensions for overlapping the other section; means for securing the said extensions around the body of the wearer; a transparent section detachably secured adjacent the face of the wearer and means for supplying air to the inside of the garment.

4. A protective garment comprising a head portion; a body portion extending downwardly from said head portion, said head portion having an interlining adapted to engage the head of the wearer and thereby form a seal, said head portion having perforations above the line of seal; a transparent section detachably secured adjacent the face of the wearer and having a por-

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tion adapted to slide between the outer portion of the said head portion and the said interlining; means for adjustably securing the body portion to the wearer and means for supplying air to the inside of the garment.

5. A protective garment comprising an adjustable head portion; a body portion extending downwardly from said head portion, said body portion being divided to extend around the arms of the wearer; means for binding the body portion to the wearer to prevent air from passing between the body portion of the garment and the wearer into the head portion of the garment, said head portion having an interlining adapted to engage and encircle the head of the wearer, said head portion being perforated above the point of contact of the interlining with the head of the wearer; a detachable flexible transparent section extending before the face of the wearer and means for supplying air to the interior of the garment adjacent to the face of the wearer.

6. A protective garment comprising a head portion; a flexible body portion extending from the head portion; a transparent section secured within the head portion; an air inlet; means for binding the body portion of the garment around the body of the wearer to form a seal; and an air distributor connected with the air inlet for directing a portion of the incoming air toward the transparent section and another portion of the incoming air around the interior of the garment.

7. A protective garment comprising a head portion; a body portion extending downwardly from the head portion; means for binding the body portion to the body of the wearer; a transparent section detachably connected adjacent the head portion of the garment; an air inlet having a branched inner end, each of said branches extending over the shoulder of the wearer and toward the front of the interior of the garment; and an air distributor in communication with each branched end, said air distributor acting to direct air toward the transparent section and around the interior of the garment.

8. A protective garment comprising a head portion; a body extending downwardly from the head portion; means for binding

the body portion to the body of the wearer; a transparent section detachably connected adjacent the head portion of the garment; an air outlet; an air inlet; and an air distributor connected to the air inlet, said distributor acting to direct a portion of the incoming air toward the transparent section and another portion of the incoming air around the interior of the garment.

9. A protective garment comprising a head portion; and a body portion extending downwardly from said head portion; means for binding the body portion to the body of the wearer; a transparent section detachably secured adjacent the head portion, said head portion being split; an elastic insert secured to the garment and adapted to span the said split in the head portion and means for supplying air to the head portion.

10. A protective garment comprising a head portion; a body portion extending downwardly from said head portion; means for binding the body portion to the body of the wearer; a transparent section detachably secured adjacent the head portion, said head portion being split; an elastic insert secured to the garment and adapted to span the said split in the head portion; means for drawing the split portions of the head portion together and means for supplying air to the head portion.

11. A protective garment including a head portion having an opening therein; a flexible transparent section for closing said opening; a flexible frame for the said section; and means for detachably connecting the frame having the said section therein to the head portion.

12. A protective garment comprising a head portion; a body portion extending downwardly from the said head portion; a transparent section; a flexible frame for the transparent section; buttons for securing the flexible frame to the head portion; and means for supplying air to the head portion.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

HENRY G. DINN.

Witnesses:

AUGUSTUS B. COPPES,
JOS. H. KLEIN.