This invention relates to a mask designed to be worn by pneumatic drill operators, miners or others to prevent dust from entering the mouth and nose of the wearer thereof and to supply clean air for breathing.

An object of the invention is to provide a mask that is light in weight, compact, durable in use and efficient in operation.

Another object of the invention is to provide a mask having means connected thereto for preventing dust entering therein and getting in the nose and mouth of the wearer thereof.

With the above and other objects in view the invention consists of the novel details of construction, arrangement and combination of parts more fully hereinafter described, claimed and illustrated in the accompanying drawings in which:

Figure 1 is a rear view of an embodiment of the invention;
Figure 2 is a plan view thereof;
Figure 3 is a sectional view on the line 3—3 of Figure 1;
Figure 4 is a front view thereof and
Figure 5 is an elevational view partly in section of the mask applied to the head of the wearer thereof.

Referring more in detail to the drawings the reference numeral 10 designates the body of the mask which is made of aluminum, tin or light copper material. The body 10 approximates an elliptical cone in cross section having the opposed cut outs 12 which are adapted to engage the bridge of the nose and the chin of the wearer at the center 14 thereof and a portion of the cheeks of the wearer at the outer ends 16 thereof. The marginal edge of the cutout is provided with felt or rubber padding 18 or the like to seal the edge of the body and exclude dust from the interior thereof.

Positioned in the forward end of the body 10 is a tapered or conical open ended member 20 having outer wall 21 and inner wall 22 and the inner wall is provided with a circular flange 23 at the rear edge thereof which is secured to the outer wall and spaces the inner wall therefrom to form the chamber 24. The outer wall conforms to and is secured to the body 10 by means of fasteners 26 engaging the apertured ears 27 formed on the outer wall 21 outwardly of the flange 23. The walls of the member 20 are of greater length than the body 10 and the inner wall 22 is provided with opposed outlets 28 and threaded bosses 29 to receive the complementary threaded ends of the goose neck tubing 30 having the flexible tubing 32 connected thereto which extending beyond the wearer's head as shown in Figure 5 is connected by a Y connection 34 to a flexible tubing 36 which may be connected to the air line of the drill not shown. The tubes 30 passing through the mask 18 in alignment with outlets 26 openings 37 to be received in the bosses 28.

The inner wall 22 of the member 20 is provided with spaced and oppositely aligned apertures 35 to permit fresh air to enter the body of the mask from the chambers 24.

The sides and top of the body is provided with hangers 40 for attaching the overhead strap 42 and head encircling strap 44 thereto which strap has a hook 46 for attaching the free end of strap 42 thereto.

Thus a mask has been provided that is to be used when the wearer thereof is using a pneumatic drill. The rubber tubing 32 by attachment to the air hose of the drill serves to force air through the air chamber 24 thereby forcing dust away from the wearer, out of the forward open end 48 of the chamber 24. The dust being forced away from the wearer the mask requires no filters and being made of aluminum or other light material is easy to wear and adjust.

The member 20 may be removed from the mask for cleaning by removing the fasteners 26 and the goose necks 30 from the bosses 28.

It is believed that the above description will clearly explain the operation and construction of the device to those skilled in the art and it is to be understood that changes in the details of construction, arrangement and combination of parts may be resorted to provided they fall within the spirit of the invention and the scope of the appended claim.

Having thus described the invention what is claimed as new and desired to be secured by Letters Patent is:

In a protective mask, the combination which comprises a substantially conical-shape casing elliptical in cross section and shaped to fit over the nose and mouth of a person with the large end in sealing relation with the face and with the walls thereof converging outwardly from the face, an inner double walled frusto-conical shaped member having inner and outer sections with the inner end of the inner section flanged and with the flange sealing the inner end of the said frusto-conical shaped member, the walls of the said inner and outer sections of the frusto-conical shaped member being in spaced relation providing an annular air chamber between the sections and with the outer ends of the chamber open, said
frusto-conical shaped member positioned in the outer end of the mask with the open end of the chamber therein extended outwardly, and suitable connections to the said frusto-conical shaped member for supplying air to the chamber wherein the air supplied to the chamber provides a continuous circular air screen around the outer end of the mask.

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

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