

Aug. 18, 1936.

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2,051,730

FACE SHIELD

Filed Dec. 6, 1934

2 Sheets-Sheet 1

Fig. 1.

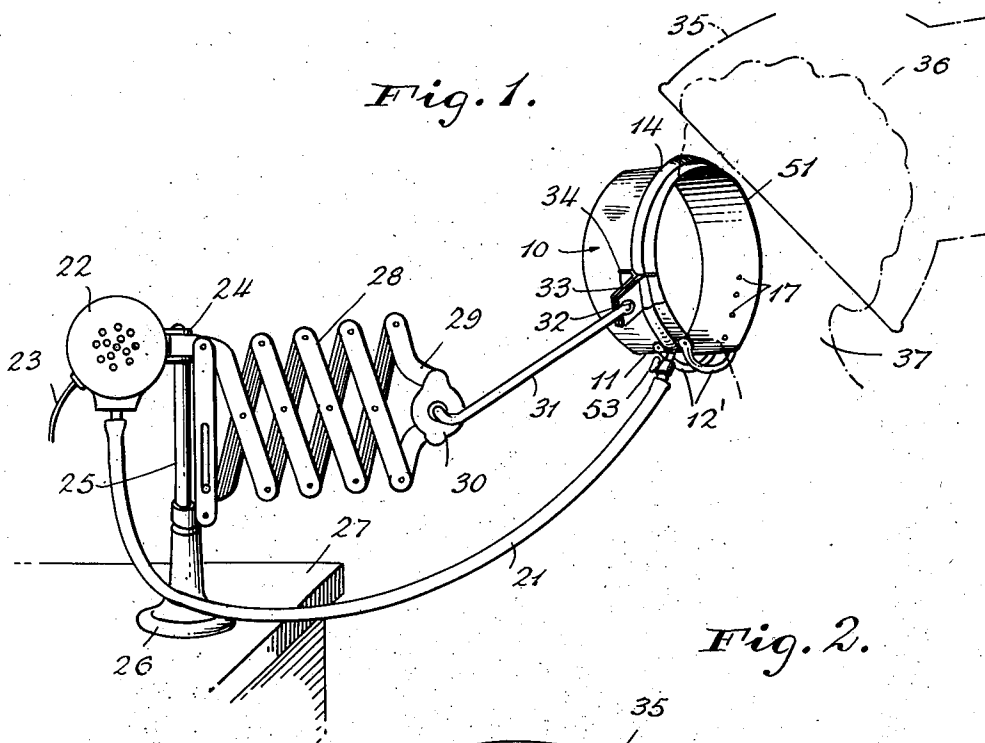
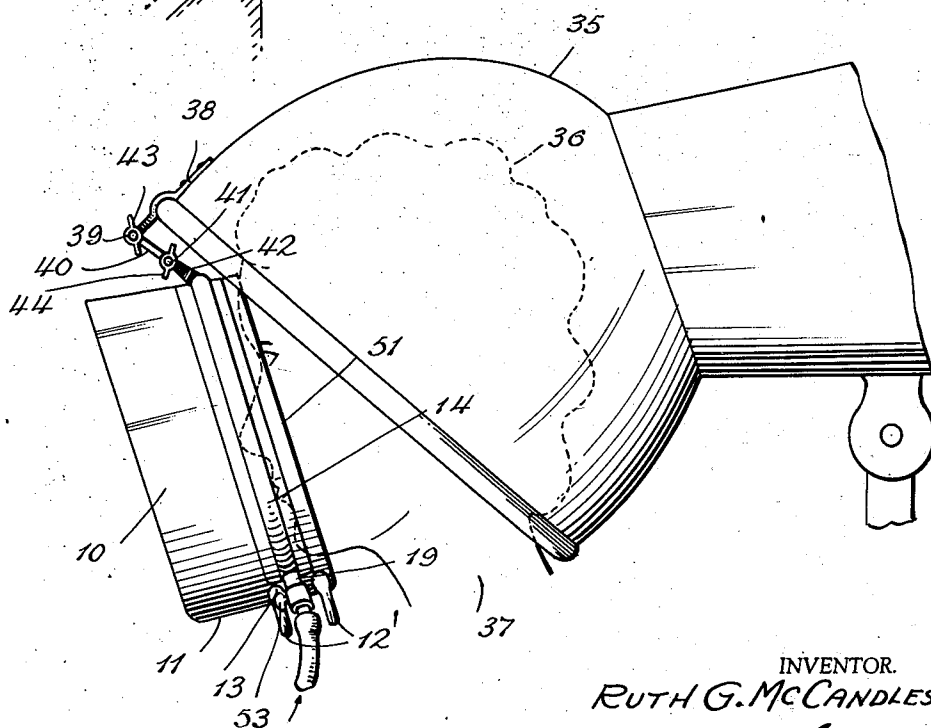


Fig. 2.



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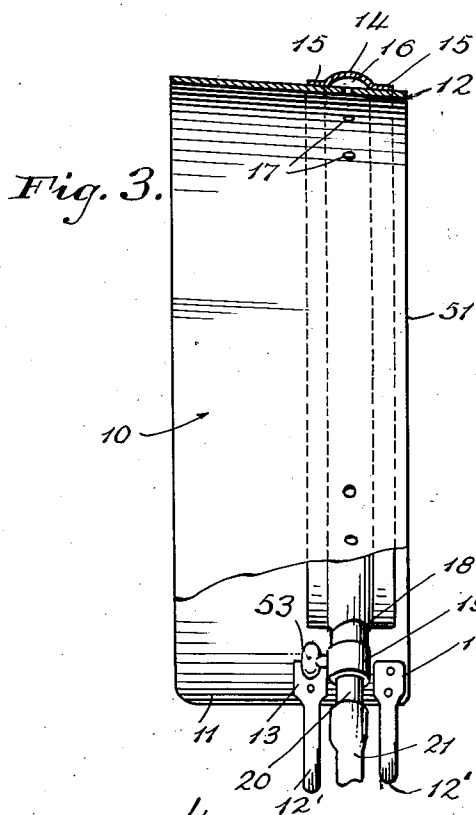
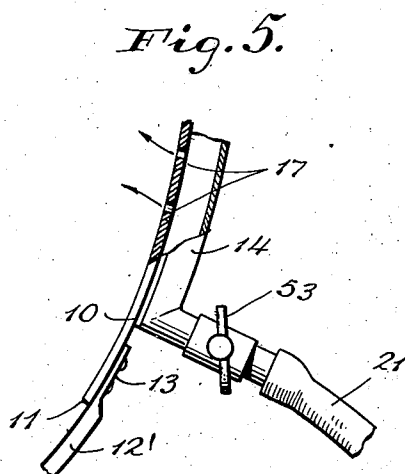
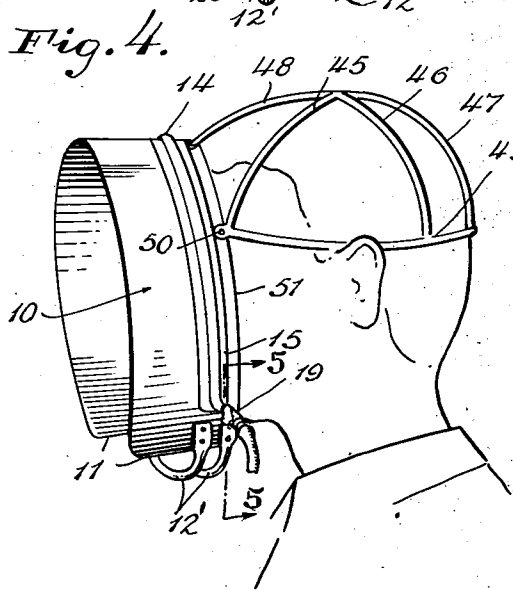
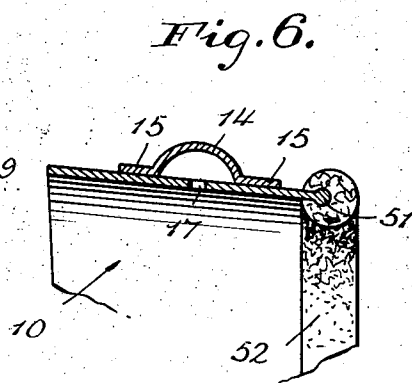
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2 Sheets-Sheet 2



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2,051,730

FACE SHIELD

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12 Claims. (Cl. 128—145)

The present invention relates to a face shield and it particularly relates to a shield to assure a supply of fresh air to the face of a person, the other parts of whose head are being subjected to treatment with a heated atmosphere, and/or for a person who may be compelled to work or otherwise be located in an undesirable atmosphere.

In certain hair treating operations it is customary to blow a blast of heated air upon the hair of the person, and this blast of heated air often makes respiration uncomfortable and undesirably affects the nasal and throat passages of the person whose hair is being treated.

In addition, it is often necessary for workers in many lines to do certain tasks in the presence of unpleasant fumes or chemical vapors, and it is desirable that they be permitted to work with full vision and full ability to maintain a conversation without being disadvantageously affected by such fumes or chemical vapors.

An object of the present invention is to provide an improved face shield device which will assure adequate ventilation of the face of persons whose hair is being treated and/or who must work in an undesirable atmosphere, which shield will be of inexpensive construction and will be substantially indestructible although subjected to rough usage, and which will not seriously inconvenience the wearer either in respect to vision or conversational powers, or in respect to causing discomfort.

Another object is to provide an improved face shield for supplying a person, as above described, with fresh air which may be readily transported with the person and which is universally adaptable to being utilized in connection with treatment of the hair and/or other purposes.

Other objects will appear during the course of the following specification.

In accomplishing the above objects it has been found most satisfactory to provide a shield which will fit around the user's face, which shield is provided with one or more passages and with a series of openings admitting air from said passages to the interior of said shield and across the face of the wearer.

The flow of air is preferably accomplished by a small electric blower which may be supported near by the user, or which may be suspended on the body of the user to be transported. If desired, the intake of such blower may be provided with suitable filtering equipment of a mechanical or chemical nature to remove or control any impurities in the atmosphere.

The shield may be provided with suitable straps or other attachment means so that it can be

readily applied to the face of the user, or it may be readily suspended from the equipment utilized for treating the hair, as for example in connection with hair driers such as are used in beauty parlors.

The above and other objects will appear more fully when taken in connection with the accompanying drawings which illustrate a preferred embodiment of the inventive idea.

In the drawings:

Figure 1 is a perspective showing of one type of shield and the method of applying it to the face of the user.

Figure 2 is a side view upon an enlarged scale showing the shield of Fig. 1 suspended from hair drying equipment.

Figure 3 is a side view in partial section of the shield by itself upon a still larger scale.

Figure 4 is a side view showing how the shield of Figs. 1 to 3 may be applied to the head of a user for convenient transportation.

Figure 5 is a side sectional view upon an enlarged scale upon the line 5—5 of Fig. 4.

Figure 6 is a fragmentary view upon an enlarged scale of an alternative embodiment of a shield illustrating the method of application to the face of the user.

Referring to Figs. 1 and 3 the shield 10 is formed of a substantially cylindrical sheet of metal which is open at its lower end, as indicated at 11, and which may be tapered to converge toward the face of the user, as indicated at 12 in Fig. 3.

The adjacent ends 11 at the bottom of the shield are held together by the strap members 12 which may be riveted, welded or otherwise connected to said edges 11, as indicated at 13 in Figs. 3 and 5.

Welded to the rear outside face of the shield is the peripheral enclosure 14 provided with the flanges 15 contacting the outside periphery of the shield 10. The interior of the passage 16 formed inside the member 14 is provided with a series of openings 17, spaced about the interior of the cylindrical body of the shield 10. One of the ends 18 of the member 14 is formed into a tube indicated at 19 in Fig. 3, which tube has a nipple 20 to which may be connected the hose 21, see also Fig. 1, connected to the electrical blower 22.

Referring to Fig. 1 the electrical blower 22 is supplied with the electrical conduits 23 and is supported at 24 upon a stand 25 having a base 26 upon a horizontal support, table or shelf 27. The stand 25 also carries the pantograph or collapsing extensible support 28, the forward end 29

of which holds the base member 30 carrying the arm 31.

The arm 31 is connected at 32 to the bracket 33 which may be welded or otherwise attached at 34 to the cylindrical outer surface of the face shield 10.

The semi-spherical element 35 encloses the hair 36 of the user 37, and will serve to direct a blast of hot air upon said hair 36 during hair treating operations.

However, with the shield 10 in position as shown in Fig. 1, and with the blower 22 operating, a blast of fresh air will be directed to the tube 21, into the passageway 16, and from this passageway 16 through the openings 17 over and onto the face of the person 37, with assurance that said person will always be breathing fresh air and will not be subjected to the blast of heated air directed on the hair 36 in the enclosure 35.

It is of course readily possible to support the shield 10 in other manners, another type of suitable supporting means being shown in Fig. 2.

In Fig. 2 to the top of the dome or semi-spherical blower element 35 is connected the bracket 38, which is pivotally connected at its forward end 39 to the downwardly extending link 40, which link in turn is pivotally connected at 41 to the bracket 42 on the shield 10. The wing nuts 43 and 44 enable fixing of the shield in any desired position on the face of the user.

As shown in Fig. 4 the shield also may be made readily transportable by providing the head attachment straps 45, 46, 47, 48 and 49, which are suitably connected to the inner edge of the shield 10 at a plurality of points, as indicated at 50.

In the embodiment of Fig. 4 the blower 22 may be conveniently supported about the person of the wearer, as may also a conveniently sized actuating battery, or the blower may be actuated by the movement of the legs of the arms of the user.

The inner edges 51 of the shields are usually shaped so as to closely and conveniently fit the face of the wearer, but if desired, as indicated upon Fig. 6, the inner edge 51 may be provided with a rubber edge 52 to closely fit the face of the wearer.

If desired, it is also possible to utilize various other types of face conforming means such as straps and so forth.

As shown in Fig. 5 it is possible to regulate the blast of air from the blower 22 of Fig. 1 and through the opening 17 by the valve 53, which may be most readily regulated by the user of the device.

It is thus evident that the present invention provides a shield which may be most conveniently fitted upon the user's face and which will assure the user of a supply of fresh cool air for comfortable respiration in the presence of blasts of heated air, unpleasant fumes, or chemical vapors. The structure as shown may be most readily constructed at a very low cost, is not readily deranged and is not of great weight. The body of the shield 10 may be made of light weight metal or of plastic sheet material.

The device of the present invention will also protect the face of industrial workers from undesirable fumes, flying particles, dirt, dust and so forth which may be circulating in the air.

In connection with beauty parlors, the shield will avoid the discomfort due to the forcing of blasts of hot air over the face and due to the respiration of the heated air for considerable

periods of time. The shield of the present invention protects the patron's face from blasts of air from the drier and a moderate current of cool air keeps the patron's face at a comfortable temperature, and provides cool air for comfortable respiration.

It will be noted that the shield does not interfere with the vision or conversation of the user.

What is claimed is:

1. A face shield of the character described comprising an encircling cylindrical shield member to be fitted to the face of the user to substantially completely encircle the face of the user without substantially covering and masking the face and air blower means associated with such shield peripherally spaced and distributed inside of the shield member substantially around the entire circumference thereof, to direct a current of fresh air across the face of the user.

2. A face shield of the character described comprising a split cylindrical shell to substantially completely encircle the face of the user without substantially covering and masking the face, said shell carrying a tubular air passage on the exterior thereof, which air passage is provided with a series of openings into the closure within the shell peripherally spaced and distributed inside of the shield member substantially around the entire circumference thereof.

3. A device for protecting the face of a person from the stream of hot air directed upon the hair of the head of said person, from a hot air hair drier, comprising a semi-cylindrical face shield adapted to be suspended from the hair drier and adapted to be fitted to the face of the person being treated to substantially completely encircle the face of the user without substantially covering and masking the face, said semi-cylindrical face shield being provided with an independent source of fresh air and with means to direct said fresh air across the face of the user peripherally spaced and distributed inside of the shield member substantially around the entire circumference thereof.

4. A face shield of the character described for use in protecting the face of a person from a flow of hot air directed upon the head of said person from a direction other than in front of the face of said person, comprising a shield member having side walls of substantial depth and having opened ends, so that said face is not substantially covered or masked by said shield member, one of said opened ends being adapted to accommodate a substantial part of the face of said person excluding the hair, the said side walls extending from the said face to the other opened end and constituting a construction protruding from the face which deflects the flow of hot air directed upon the said head away from the part of the face accommodated, an air conduit carried by said shield, said air conduit having an opening adapted to introduce air from the inner side of the side walls of said shield member into the space between the said side walls of said shield member, and a resilient member mounted on said shield member on the portion which comes in contact with said face.

5. In combination, a semi-cylindrical face shield to be fitted to the face of the person being treated to substantially completely encircle the face of the user without substantially covering and masking the face, said semi-cylindrical face shield being provided with a source of fresh air and with a plurality of interior openings peripherally spaced and distributed inside of the

shield member substantially around the entire circumference thereof to direct said fresh air across the face of the user, and means to adjust the flow of said fresh air.

6. A face shield of the character described for use in protecting the face of a person from a flow of hot air directed upon the head of said person from a direction other than in front of the face of said person, comprising a shield member having side walls of substantial depth and having opened ends so that said face is not substantially covered or masked by said shield member, one of said opened ends being adapted to accommodate a substantial part of the face of said person excluding the hair, the said side walls extending from the said face to the other opened end and constituting a construction protruding from the face which deflects the flow of hot air directed upon the said head away from the part of the face accommodated, means for blowing air upon the face of said person, said means being adapted to introduce air from the inner side of the side walls of the shield member, and adjustable means for supporting said shield member in operative position.

7. A shield for the face and forehead of the character described for use in protecting the face of a person from a flow of hot air directed upon the head of said person from a direction other than in front of the face of said person, comprising a shield member having side walls and opened ends so that said face is not substantially covered or masked by said shield member, one of said opened ends being adapted to accommodate a substantial part of the face of said person excluding the hair, and being further adapted to snugly engage the face and the forehead so that hot air striking the said end is prevented from passing between the said end and said face, the said side walls having substantial depth and extending from the said face to the other opened end and constituting a construction protruding from the face which deflects the flow of hot air directed upon the said head away from the part of the face accommodated, the said shield member having an opening within the side walls of said shield member, said opening being adapted to admit air to said face accommodated for cooling said face.

8. A face shield device comprising a cylindrical shell to encircle but not to enclose, cover or mask the face, the inner edge of said shell being formed for attachment to the head of the user, a peripheral series of openings arranged around the interior of said shell, a channel member enclosing the exterior side of said openings and adapted to feed fresh air thereto and an air hose feeding said channel member.

9. A device for protecting the face and the forehead of a person from the stream of hot air directed upon the hair of the head of said person, from a hot air hair drier, comprising, a shielding member for protecting the face of said person, said shielding member having opened ends of substantially the same size so that said face is not substantially covered or masked by said shielding member, one of said ends being adapted to accommodate a substantial part of said face but excluding the hair, and being further adapted to snugly engage the said face and the forehead so that hot air striking the said end is prevented from passing between the said end and said face, the said shielding member having side portions and a top portion of substantial depth, said side portions and said top portion extending substan-

tially forwardly from said face and constituting a protruding structure which deflects said stream of hot air directed upon the hair of the head of said person away from the part of the face accommodated by one of said ends of the shielding member.

10. A device for protecting the face and the forehead of a person from the stream of hot air directed upon the hair of the head of said person, from a hot air hair drier, comprising, a shielding member for protecting the face of said person, said shielding member having opened ends so that said face is not substantially covered or masked by said shielding member, one of said ends being adapted to accommodate a substantial part of said face but excluding the hair, and being further adapted to snugly engage the said face and the forehead so that hot air striking the said end is prevented from passing between the said end and said face, the said shielding member having side portions and a top portion of substantial depth, said side portions and said top portion being flared, and constituting a protruding structure which deflects the said stream of hot air directed upon the hair of the head of said person away from the part of the face accommodated by one of said ends of the shielding member.

11. A device for protecting the face and the forehead of a person from the stream of hot air directed upon the hair of the head of said person, from a hot air hair drier, comprising, in combination, a shielding member for protecting the face of said person, said shielding member having opened ends of substantially the same size so that said face is not substantially covered or masked by said shielding member, one of said ends being adapted to accommodate a substantial part of said face but excluding the hair, and being further adapted to snugly engage the said face and the forehead so that hot air striking the said end is prevented from passing between the said end and said face, the said shielding member having side portions and a top portion of substantial depth, said side portions and said top portion extending substantially forwardly from said face and constituting a protruding structure which deflects the said stream of hot air directed upon the hair of the head of said person away from the part of the face accommodated by one of said ends of the shielding member, an air conduit, said conduit having an opening adapted to discharge air from the inside of said shielding member so as to furnish said air to the part of the face accommodated by said shielding member and adjustable means for supporting said shielding member in operative position.

12. A device for protecting the face and the forehead of a person from the stream of hot air directed upon the hair of the head of said person, from a hot air hair drier, comprising, in combination, a shielding member for protecting the face of said person, said shielding member having opened ends, one of said ends being adapted to accommodate a substantial part of said face but excluding the hair, and being further adapted to snugly engage the said face and the forehead so that hot air striking the said end is prevented from passing between the said end and said face, the said shielding member having side portions and a top portion of substantial depth, said side portions and said top portion being flared, and constituting a protruding structure which deflects

the said stream of hot air directed upon the hair of the head of said person away from the part of the face accommodated by one of said ends of the shielding member, an air conduit, said
5 conduit having an opening adapted to discharge air from the inside of said shielding member so as to furnish said air to the part to the face accommodated by said shielding member and means for controlling the discharge of air through said opening.

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