March 12, 1935. J. G. HUEY 1,994,103

FACE PROTECTOR

Filed Oct. 4, 1933 4 Sheets-Sheet 1

Fig. 1.

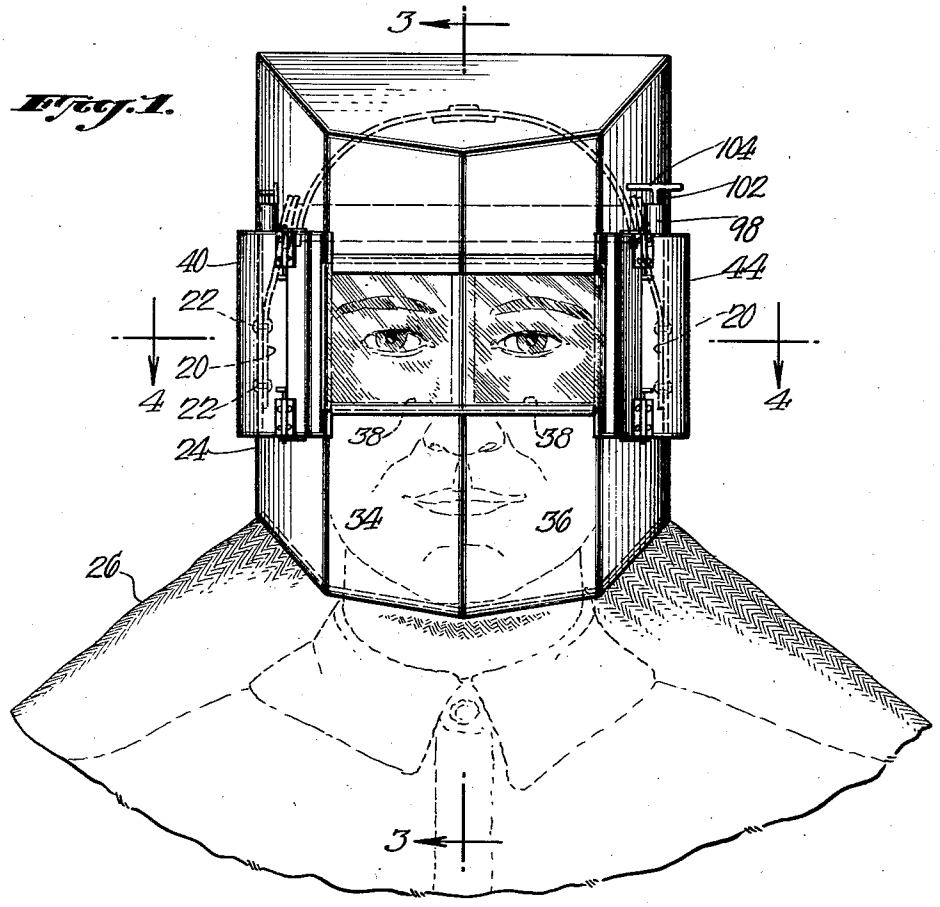
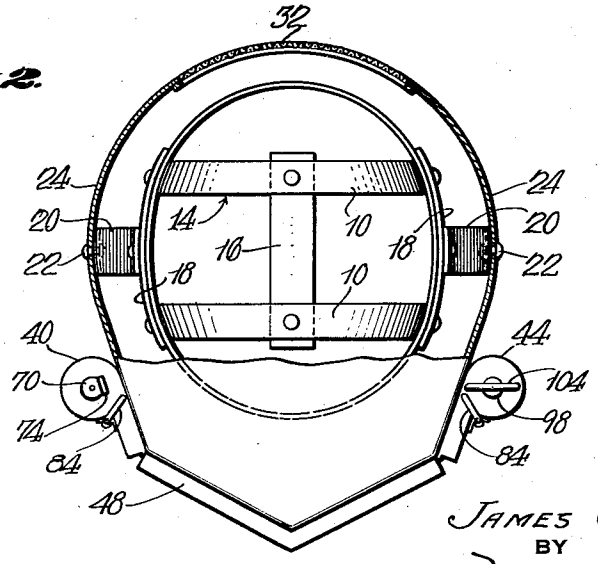


Fig. 2.



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March 12, 1935. J. G. HUEY 1,994,103

FACE PROTECTOR

Filed Oct. 4, 1933 4 Sheets-Sheet 2

Fig. 3.

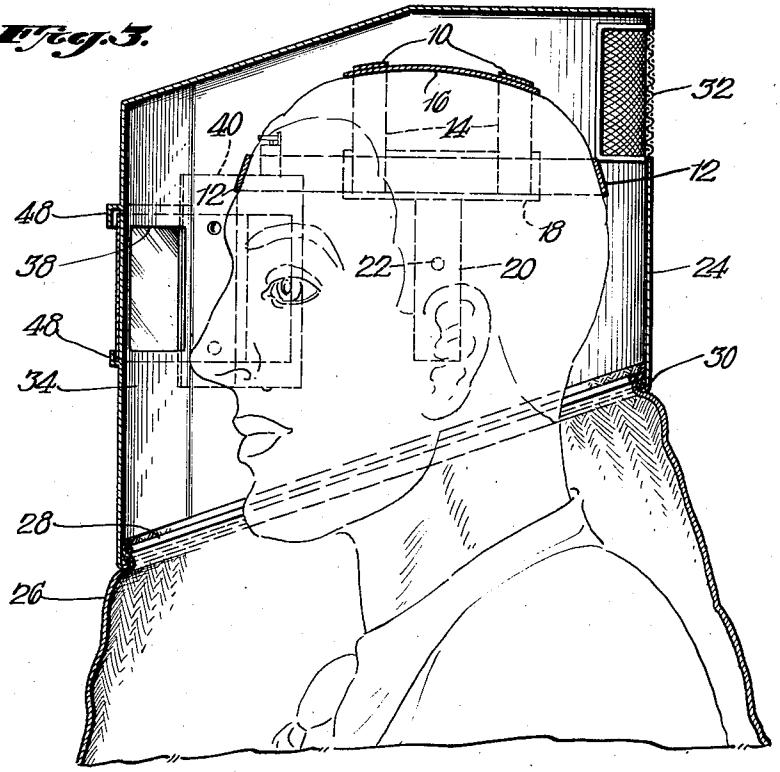
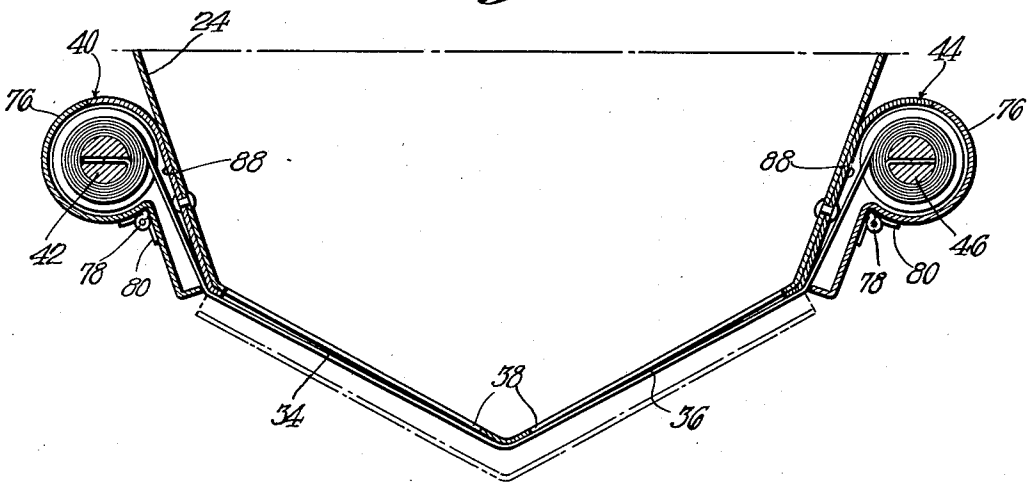


Fig. 4.



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March 12, 1935. J. G. HUEY 1,994,103

FACE PROTECTOR

Filed Oct. 4, 1933 4 Sheets-Sheet 3

Fig. 5.

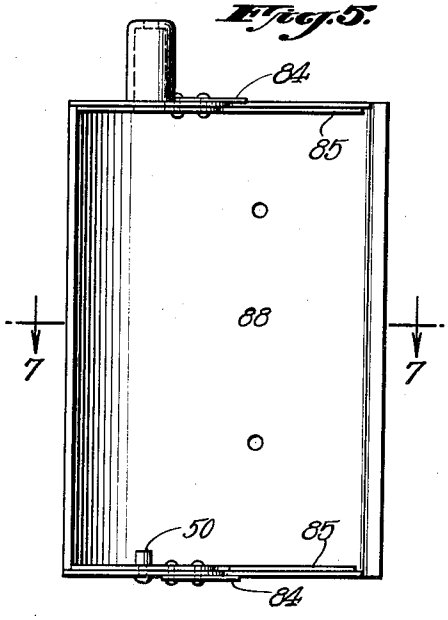


Fig. 8.

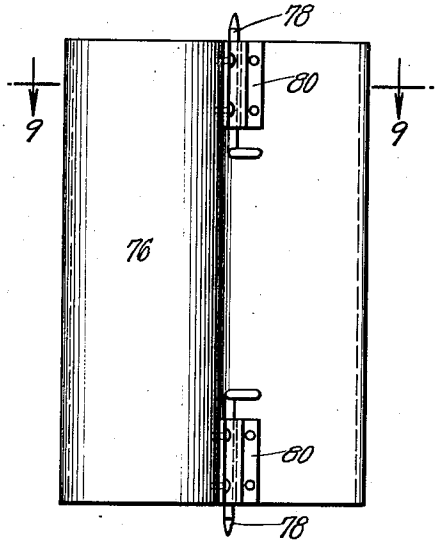


Fig. 6.

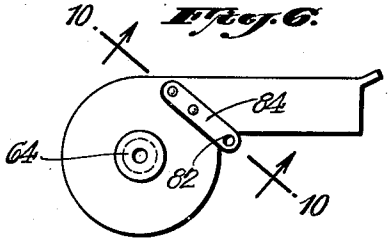


Fig. 9.

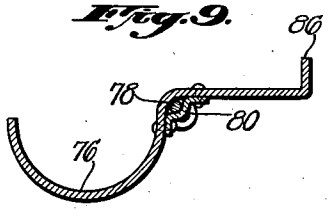


Fig. 7.

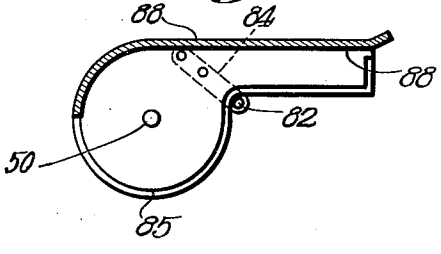
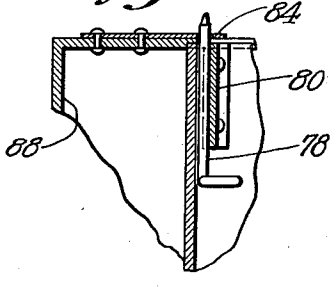


Fig. 10.



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FACE PROTECTOR

Filed Oct. 4, 1933 4 Sheets-Sheet 4

Fig. 11.

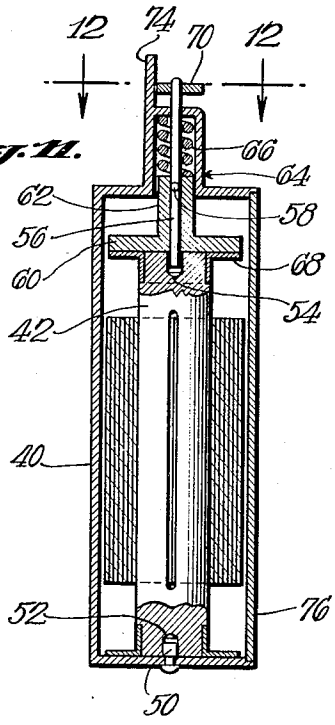


Fig. 13.

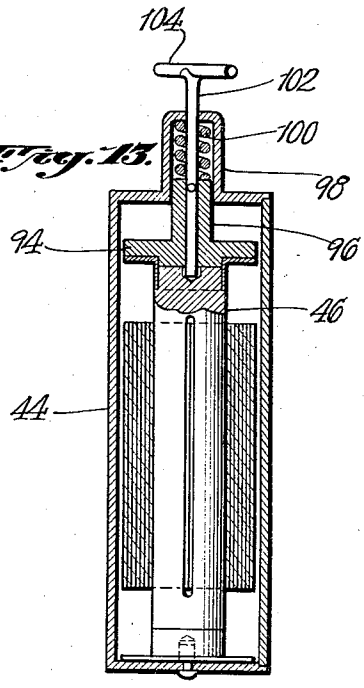


Fig. 12.

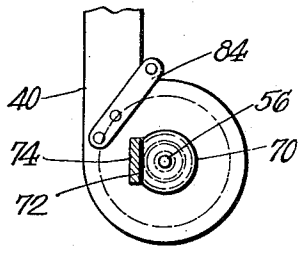
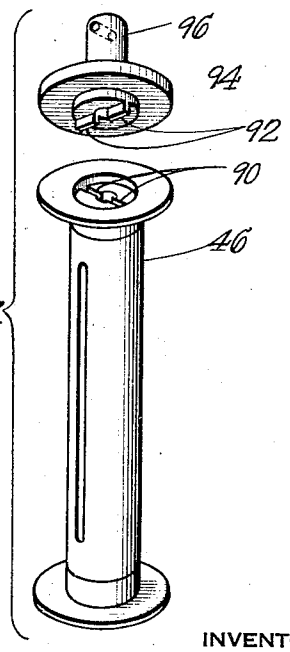


Fig. 14.



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Patented Mar. 12, 1935 1,994,103

UNITED STATES PATENT OFFICE

1,994,103

FACE PROTECTOR

James G. Huey, Fairfield, Ala.

Application October 4, 1933, Serial No. 692,156

3 Claims. (Cl. 2—8)

This invention relates to a face protector of the type having a mask-like casing of rigid material adapted to be held in spaced relationship from the wearer's face by a head harness, the casing having sight openings in front normally closed by a renewable transparent medium. One of the important characteristics of the invention relates to the employment of a supply of flexible, transparent, protecting tissue, which can be conveniently mounted on a supply roll and guided in front of the sight opening and wound up on a take-up roll so that as the tissue becomes soiled in use a fresh and clean supply can be brought into the line of vision. In its more detailed aspects, the invention contemplates the provision of improved means for mounting a supply of protective tissue as well as means for exerting a friction drag on the supply and also means for detachably mounting the supply and take-up rolls to facilitate insertion of a fresh supply roll and the removal of accumulated soiled tissue on the make-up roll.

The invention will be more fully apparent from the following description when read in connection with the accompanying drawings and will be defined with particularlity in the appended claims.

In the drawings—

Fig. 1 is a front view of a face protector embodying my invention; Fig. 2 is a plan of Fig. 1, parts thereof being broken away; Fig. 3 is a vertical section on line 3—3 of Fig. 1; Fig. 4 is a fragmentary horizontal section on line 4—4 of Fig. 1; Fig. 5 is a detail view of one of the roll housings; Fig. 6 is a plan view thereof; Fig. 7 is a detail section on line 7—7 of Fig. 5; Fig. 8 is a detail view of a roll cover adapted to be fitted to the housing of Fig. 5; Fig. 9 is a section on line 9—9 of Fig. 8; Fig. 10 is a fragmentary view illustrating the manner of detachably securing the cover of Fig. 8 to the housing of Fig. 5; Fig. 11 is a fragmentary detail view of a tissue supply roll and its mounting; Fig. 12 is a detail section on line 12—12 of Fig. 11; Fig. 13 is a detail view of the take-up roll and its detachable mounting; Fig. 14 is a perspective view illustrating a detachable connection between the take-up roll and one of its trunnion mountings.

Referring in detail to the drawings, 10 represents a head harness comprising a band 12 adapted to fit around the wearer's forehead and backhead and including straps 14 which pass over the top of the head and fasten to a member 16. The band 12 and straps 14 are secured to strips 18 which in turn are fastened to similar strips 20 of fiber or the like. These strips are riveted, as indicated at 22 to the side walls of a casing 24 formed of light sheet metal such as aluminum or the like. This casing is held in proper spaced relationship from the wearer's face by the head harness and at its lower end it has detachably secured thereto a neck cloth or cape 26, the latter having a spring ring 28 secured along its upper edge, which is adapted to engage a ring or bead 30 formed at the lower marginal edge of the casing.

At the upper rear portion of the casing, a screen member 32 is provided, in order to ventilate the device.

The forward portion of the casing includes two converging panels 34 and 36 which meet at the center line, as shown in Fig. 1. Sight openings 38 are formed in the panels. These are normally closed by the improved renewable flexible transparent tissue of my invention.

Adjacent the panel 34, there is located a housing member 40 which accommodates a supply roll 42 of transparent tissue. A similar housing 44 is located adjacent the panel 36 and accommodates the take-up roll 46. A quantity of flexible transparent tissue such as cellophane or the like is carried by the supply roll 42. This tissue spans the sight openings, the edges thereof being guided by suitable edge guide strips 48. One end of the tissue is engaged with the take-up roll and as it becomes soiled in use it will be wound up thereon, so as to provide clean, transparent tissue in line with the sight openings and thus permit clear and unobstructed vision.

The supply roll for the transparent tissue is preferably removably supported so as to facilitate the ready insertion of a new supply, after a given roll has been used up. A suitable mounting and housing for the supply roll is illustrated in Figs. 5 to 8 inclusive. The supply roll housing 40 carries a fixed trunnion pin 50 for engagement with the axial recess 52 in one end of the supply roll. This roll has a similar recess 54 at its opposite end for engagement with a spindle 56 secured by a pin 58 to a friction disc 60 having a trunnion hub 62 which slidably engages a shell-like bearing member 64 formed integrally with or secured to the housing 40. A spring 66 surrounding the spindle 56 and located within the bearing member 64, normally presses the friction disc 60 against a flange 68 secured to the supply roll, thus exerting a friction drag tending to resist the unwinding of the tissue from the roll.

For preventing the friction disc 60 from rotating, a washer 70 is secured to the spindle 56,

this washer having a flattened portion 72, as indicated in Fig. 12, which bears against a fixed plate 74 secured to the supply roll housing 40. When it is desired to insert a new supply roll, or remove one which has been depleted of its supply of tissue, this is accomplished by lifting the washer 70 with the thumbnail and thus withdrawing the spindle from the axial opening 54 at the end of the supply roll.

Normally, the supply roll is concealed by a detachable cover 76, such as shown in Fig. 9. This cover carries latch pins 78 which are slidable longitudinally in guided pockets formed by corner brackets 80 riveted to the covers, as illustrated in Figs. 8 and 9. The free ends of the latch pins 78 are pointed so as to permit of their readily engaging latch openings 82 formed in latch strips 84 riveted to the upper and lower faces, respectively, of the roll housings. The marginal edges of the top and bottom plates of the roll housings are rabbeted, as shown at 85, to a suitable depth and width, so as to make a neat fit for the cover of Figs. 8 and 9. The edge 86 of the cover terminates slightly short of the inner face 88 of the housing, thus leaving a narrow slot to permit the transparent tissue to freely pass through as it is unwound from the supply roll and wound on the take-up roll.

The housing and cover for the take-up roll is substantially the same as that described for the supply roll except that it is made of opposite hand.

The take-up roll is trunnioned at one end on a pin similar to the pin 50 described for the supply roll. The opposite end of the take-up roll is provided with slots 90 for engagement with prongs 92 projecting from trunnion member 94. This member has a trunnion hub 96 which engages a bearing portion 98 secured to or forming part of the take-up roll housing 44. A spring 100 normally tends to press the trunnion member 94 and its prongs into engagement with the take-up roll. The trunnion member is secured by the pin to the spindle 102 which has an operating bar 104 secured to one end. When the supply of clean tissue from the roll 42 has been substantially all exhausted and there is a considerable accumulation of soiled tissue on the take-up roll 46, the latter can be removed merely by detaching the housing cover and pulling the operating bar 104 outwardly so as to release the roll. The roll of soiled tissue removed from the housing 44 will be discarded and a fresh supply roll inserted in the housing 40. In some cases, the roll which was formerly used for accommodating the clean tissue may subsequently be used for the take-up roll. The supply and take-up rolls may be made of inexpensive materials such as wood with pressed metal flanges at their ends and these rolls may be slitted longitudinally to facilitate engagement with the tissue.

The embodiment of the invention described while not limited thereto is extremely useful to those engaged in spraying tar, paints and the like. Particles of tar or paint cause annoyance, when they drop on the face, and give great discomfort and interfere materially with the workmen's task, when they reach the eye. Glass goggles have heretofore been employed for a similar purpose. Others have also suggested the use of removable eye lenses or have provided means for cleaning such lenses. But, they are not wholly satisfactory and have inherent disadvantages, which my invention overcomes. The transparent, renewable tissue of my invention can be more economically supplied than can glass and it takes less time to take-up when soiled than it does to clean lenses heretofore used, as exemplified by the prior art. In practice, glass lenses have also been found to sweat more or less, depending on weather conditions and after a series of cleanings they tend to acquire a permanent discoloration. My invention also eliminates the hazards due to shattering of glass lenses.

While not limited thereto, the tissue which I use is similar to cellophane and is about .0015 inch thick and contains about twenty one thousand square inches to a pound. In a practical embodiment of the invention, there is exposed approximately 13.75 square inches over the two eye openings, weighing about .0007 pound. Thus the cost of renewals is negligible and effects important economies as compared to the use of glass, in addition to the saving resulting from the lack of the necessity of spending time cleaning the lenses such as is required in the case of glass lenses used on paint sprayers' masks or goggles.

While I have described quite specifically the preferred embodiment of the invention herein illustrated, it is not to be construed that I am limited thereto since various modifications and substitutions may be made by those skilled in the art without departure from the invention as defined in the appended claims.

What I claim is:—

1. A face protector comprising a casing member for enclosing the wearer's head and having a sight opening formed therein, a supply of flexible transparent eye protecting tissue, part of which spans said opening and means for withdrawing the latter as it becomes soiled in use and a head harness secured to the casing and adapted to properly position the sight opening relatively to the wearer's eyes.

2. A face protector comprising a metal casing member with converging front panels which meet at the center, sight openings in said panels, respective supply and take-up rolls adjacent said panels, a transparent flexible tissue engaging said rolls, and respective means for removably mounting said rolls.

3. A face and head protector of the character described comprising a head enclosing casing member having a rigid front panel with a sight opening therein, respective supply and take-up rolls located on opposite sides of said sight opening, a transparent flexible tissue engaging said rolls, and respective means for removably mounting said rolls.

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