

July 29, 1924.

1,502,679

B. W. NUTT

PROTECTIVE HOOD

Filed May 23, 1921

2 Sheets-Sheet 1

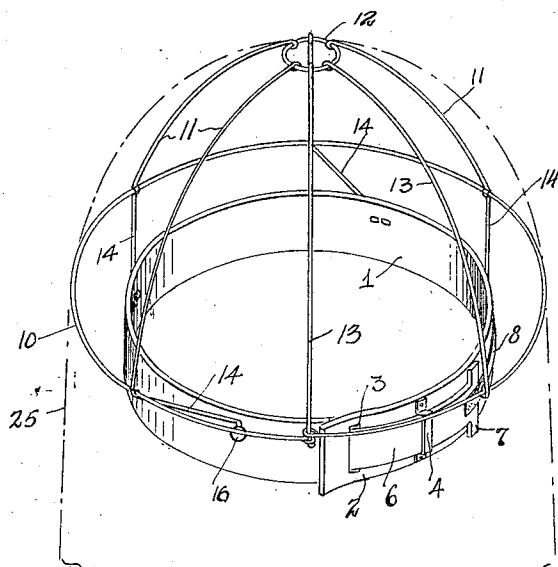


FIG. 1

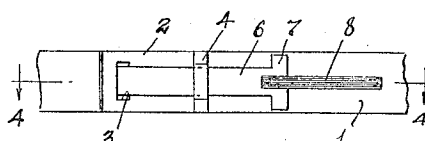


FIG. 3

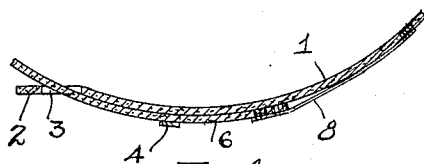


FIG. 4

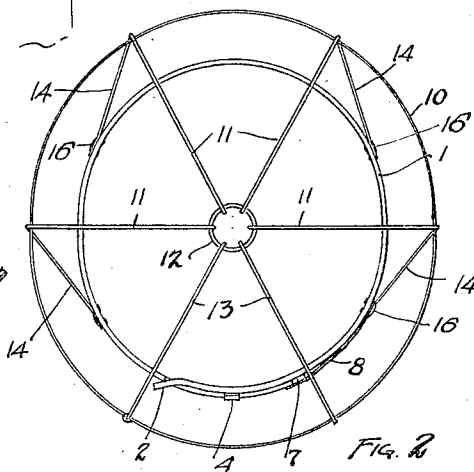


FIG. 2

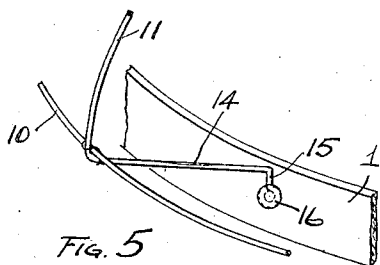


FIG. 5

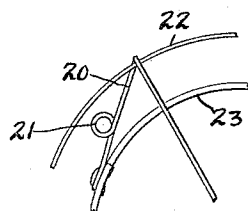


FIG. 6

INVENTOR.

Buell W. Nutt.

BY

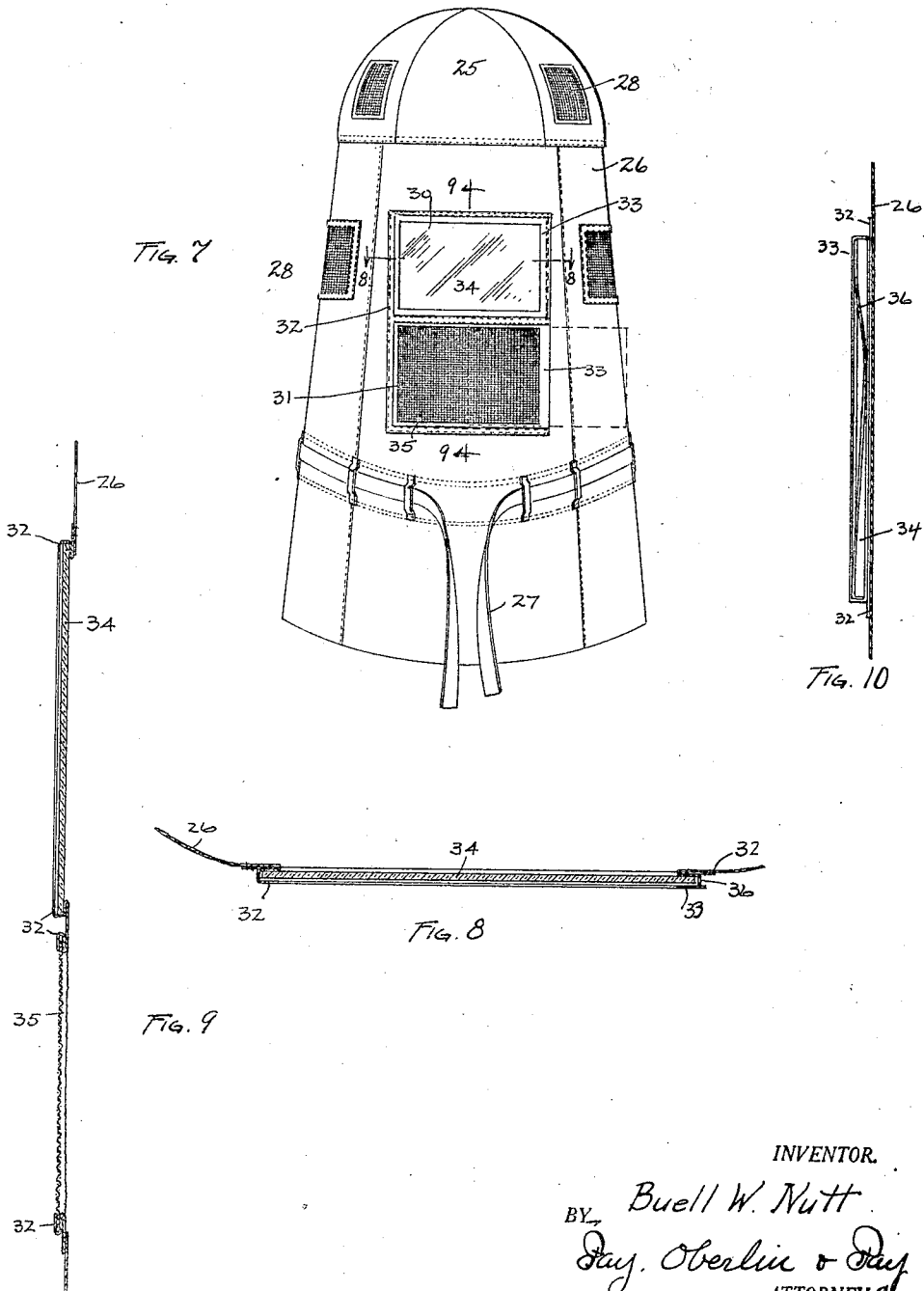
Ray, Oberlin & Ray  
ATTORNEYS

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2 Sheets-Sheet 2



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Patented July 29, 1924.

1,502,679

# UNITED STATES PATENT OFFICE.

BUELL W. NUTT, OF CLEVELAND, OHIO, ASSIGNOR TO THE SAFETY EQUIPMENT SERVICE COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

## PROTECTIVE HOOD.

Application filed May 23, 1921. Serial No. 471,575.

*To all whom it may concern:*

Be it known that I, BUELL W. NUTT, a citizen of the United States, and a resident of Cleveland, county of Cuyahoga and State of Ohio, have invented a new and useful Improvement in Protective Hoods, of which the following is a specification, the principle of the invention being herein explained, and the best mode in which I have contemplated applying that principle so as to distinguish it from other inventions.

The present invention relates to head guards and more particularly, to the supporting frame construction for a head guard and hood in which provision is made for supplying an adjustable head band as well as means for supporting the frame therefor in such a manner that the variation in head band size is readily and automatically taken care of in the supporting frame. To the accomplishment of the foregoing and related ends, said invention, then, consists of the means hereinafter fully described and particularly pointed out in the claims.

The annexed drawing and the following description set forth in detail certain mechanism embodying the invention, such disclosed means constituting, however, but one of various mechanical forms in which the principle of the invention may be used.

In said annexed drawing:—

Fig. 1 is a perspective view of my improved head band and frame showing the hood in dotted lines; Fig. 2 is a top plan view of the same with the hood removed; Fig. 3 is an elevational view of the adjustable head band; Fig. 4 is a section on the line 4—4 of Fig. 3; Fig. 5 is an enlarged perspective view of a detail; Fig. 6 is a broken plan view of a modification; Fig. 7 is a front elevation of my improved hood showing the cover in place; Fig. 8 is a section on the line 8—8 of Fig. 7; Fig. 9 is a section on the line 9—9 of Fig. 7; and Fig. 10 is an enlarged view of the open end of the frame for holding the removable side members showing the means for holding the glass in place.

The present protective hood or head guard comprises a head band 1 of leather or other soft pliable material which is adjustable, one end 2 of the band having a slot 3 and a loop 4, and the other end 5 being formed with a tongue 6 extending through the slot and loop and having a widened head 7 which is at-

tached to the first end by means of a strip 8 of elastic material so that the band may be stretched a distance equal to the distance between the widened head and the loop which will be sufficient to take in the usual variation in head sizes.

The frame work consists of a circular rim 10 considerably larger than the head band and to this rim are attached a series of wires 11 and 13 which extend upwardly and inwardly to a small ring 12 to which they are attached. As shown, there are six of these wires which with the ring, form a hemispherical cage, the two wires 13 adjacent the extensible band opening being tightly secured to the rim while the other four wires 11, while also secured to the rim 10, have their ends 14 extending beyond the same to form arms for attachment to the band. These arms 14 are bent to extend inwardly and are formed with looped or eyed ends 15 which are bent to fit flat against the outer surface of the head band and to which they are attached by means of rivets 16 or the like. The arms lie substantially tangent to the band so as to aid in allowing the adjustment to be easily made.

When the hood is placed on the wearer's head and stretched, the arms 14 give slightly so as to maintain the frame in its position substantially concentric with the head band. The entire adjustment of head band and arms is easily accomplished by merely placing the hood in position on the wearer's head.

In certain instances the arms 20 are provided with loops 21 as shown in the modification illustrated in Fig. 6. In this form the adjustment of the hood is taken care of by the arms themselves and the use of a closed head band is not necessary as the resiliency of the arms furnishes the adjustment.

It is of course, to be understood that the frame will be provided with a hood or cover of suitable protective material which will be provided with sight and ventilation openings which may be covered with screen or transparent material. The present hood is easy to adjust and to wear the elastic strip being limited strength so as not to make the band draw too tightly on the wearer. The adjustment is automatic and the hood adaptable for any size of head within normal limits. The joints between the frame members may be soldered or otherwise secured while the wires are merely looped about the

upper ring and then soldered if desired. It is of course, clear that the frame construction is adaptable for use with many types of helmets, hats or caps, as well as with merely a protective hood.

This cover 25 is formed to fit around the frame and is provided with a downwardly extending skirt 26 having draw strings 27 so that the hood may be closed around the neck of the user so as to prevent the dust from entering the hood. Suitable screen covered, ventilating apertures 28 are provided in the hood at suitable points, and in the front section of the cover, sight and breathing openings 30 and 31 are provided which will be covered by any suitable material which will vary, depending upon the conditions under which the hood is to be used. As shown, each opening is rectangular in shape and around three edges of each opening there are mounted flanged metal strips 32 which are riveted or otherwise secured to the cloth of the cover, as best shown in Figs. 8 and 9. In the present construction the two center strips 32 are adjacent so that the two openings are practically continuous. As illustrated in Fig. 7, the right hand edge of each opening has a metal frame 33 attached to the cloth, the frame being open to allow the glass or other closure members to be inserted through the openings.

As illustrated, the upper opening 30 is provided with a glass closure 34 plate which acts as a sight opening while the lower opening is shown as being closed by a screen member 35 which is shown in dotted lines in its half withdrawn position. In certain instances, both openings may be closed by a screen, or celluloid or mica may be used, and it is clear that the closure pieces may be readily removed by sliding them out of the flanged strips.

To hold the closure members in place, the frame as shown in Fig. 10, is provided with a spring 36 which is curved so as to prevent the glass from coming out past the same, but this spring may be bent flat against one face of the frame so as to allow the glass to be inserted or removed as desired.

This use of removable closure members for the sight and breathing openings is important, because in certain uses of the hood such as protection for men doing sand-blast work, a clear glass in the sight opening is preferable but this glass becomes pitted quickly from the flying sand-blast and must be removed or changed at frequent intervals. In certain instances a wire screen is to be preferred to any glass or transparent substance, and in the present hood, this may be readily accomplished and a single hood may thus be used for many purposes.

Other modes of applying the principle of my invention may be employed instead of the one explained, change being made as regards the mechanism herein disclosed, provided the means stated by any of the following claims or the equivalent of such stated means be employed.

I therefore particularly point out and distinctly claim as my invention:—

1. In a device of the character described, the combination of a rigid frame of substantially hemispherical shape, a split head band having its ends adjustably connected together, and supporting arms attached to said frame and extending to said head band and lying substantially tangent thereto, said arms being attached to said band at points spaced from the split in said band to minimize movement of said arms during adjustment of said band.

2. In a device of the character described, the combination of a rigid frame of substantially hemispherical shape consisting of a rim member and spaced wires attached to a ring at the top, certain of said wires being bent around said rim and extended inwardly to form supporting arms, the remainder of said wires having their ends attached to said rim, a split adjustable head band attached to said arms at points spaced from such split, said arms lying substantially tangent to said head band to be easily movable to allow for adjustment of said head band.

Signed by me, this 21st day of May, 1921.

BUELL W. NUTT.