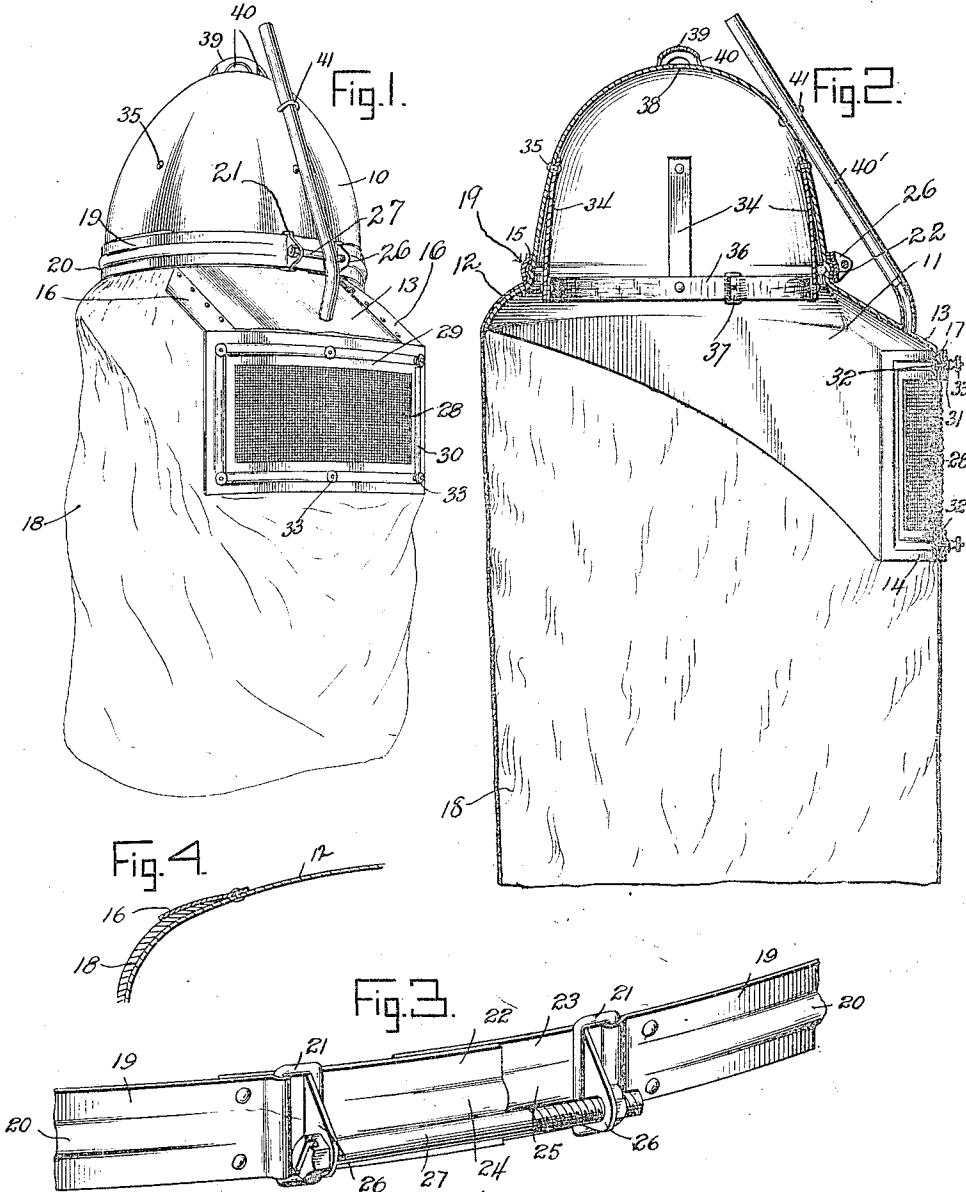


W. DUNCAN & J. A. SPANGLER.
 SANITARY SAND BLAST HELMET.
 APPLICATION FILED APR. 3, 1913.

1,075,906.

Patented Oct. 14, 1913.



WITNESSES

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WILLIAM DUNCAN AND JOHN A. SPANGLER, OF ATTICA, INDIANA.

SANITARY SAND-BLAST HELMET.

1,075,906.

Specification of Letters Patent.

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Application filed April 3, 1913. Serial No. 758,625.

To all whom it may concern:

Be it known that we, WILLIAM DUNCAN and JOHN A. SPANGLER, citizens of the United States, and residents of Attica, in the county of Fountain and State of Indiana, have invented a new and Improved Sanitary Sand-Blast Helmet, of which the following is a full, clear, and exact description.

10 This invention relates to helmets, and more particularly to a helmet of improved construction designed for use in foundries to protect the workmen without interfering with their view of the work, and which, besides being light and neat in appearance, will permit the proper supply of air to the workman without causing a suction of the dust into the helmet.

Another object of the invention resides in the provision of a sandblast helmet which is constructed of a plurality of novel parts joined in a novel manner and capable of being readily taken apart for cleaning or repair, thus insuring the highest degree of sanitation with a consequent betterment of working conditions.

With the above and other objects in view, the invention resides more particularly in the peculiar combinations and arrangements of parts which will be illustrated as a preferred embodiment in the accompanying drawings and described in the specification.

Reference is to be had to the accompanying drawings forming a part of this specification, in which like characters of reference indicate corresponding parts in all the views, and in which—

Figure 1 is a perspective view of a sanitary sandblast helmet constructed in accordance with the invention; Fig. 2 is an enlarged vertical sectional view of the improved helmet; Fig. 3 is an enlarged detail perspective view showing the manner of joining the extremities of an apron securing band employed with the device; and Fig. 4 is an enlarged detailed sectional view showing the manner of attaching the apron to the vizor, the same being taken through the vizor and apron.

10 In the illustrated embodiment of the invention, the numeral 10 designates the body of the helmet which is of dome-like form and preferably made from thin sheet metal such as aluminum pressed in the proper form. The body 10 is provided with sub-

stantially triangular-shaped and depending side extensions 11, a curved rear extension 12 and a vizor 13 formed therewith, the vizor having a depending front portion 14 having an elongated rectangular opening 80 producing a lookout.

The body of the helmet at the lower part of the crown is provided with a surrounding outstanding bead 15, and the opposite sides of the vizor have outwardly and upwardly extending plates riveted or otherwise secured thereto to produce lapovers 16, while the front portion of the vizor is provided with an outstanding bead 17 spaced from the edge of the opening. An apron 18 is provided to inclose the head and neck of the wearer, such apron being made of canvas or other washable material and cut to fit over the extensions of the helmet body and having an opening disposed over the opening in the front of the helmet body or vizor thereof. When the apron is thus applied to the helmet it overlies the bead 15, fits in the lapovers 16 and also overlies the bead 17, and when so disposed an open band 19 having a similar bead 20 is fitted on the crown of the helmet over the apron so that its bead will co-act with the bead of the crown and cause the material of the apron to be tightly held in position. This clamping action is accomplished further by means of loops 21 secured to the extremities of the flexible strip forming the band, said loops being engaged by overlapping and independently movable clips 22 and 23 having similar beads 24 and 25 to guide them in longitudinal alinement as they are shifted one with respect to the other. The outer extremity of each clip is provided with an apertured ear 26 bent forwardly substantially at right angles. A bolt 27 is engaged through the apertures of the ears and by screwing home the nut of the bolt the extremities of the band will be drawn together and in binding contact with the crown of the helmet, so that displacement of the apron is prevented.

The portion of the apron which surrounds the front portion of the vizor engages over the bead 17 and together with a section of wire mesh 28, preferably of brass, is held in conformity to said front portion and its bead through the instrumentality of a securing frame 29 having a bead 30 cooperating with the bead 17 to form a tight joint.

The beaded portions of the front of the vizor, the screen and the securing frame are provided with spaced openings preferably located at the corners and intermediate the ends of the upper and lower portions of the bead so as to aline with each other when the parts are assembled, whereby they may be held in position by means of clamping bolts 31 having T-heads 32 held from rotation and thumb nuts 33 engaged thereon for securing the same without the use of any special form of tool.

In order to adjust the size of the helmet to properly fit a person's head and increase the comfort of wearing the same, a plurality of springs 34, in the form of thin strips or sections of brass, are anchored at their upper ends to the helmet body as shown at 35, such springs being of the proper tension to hold the helmet firmly on the head of the wearer through the instrumentality of a head band 36 connected to the lower portions of the springs. This head band is made of washable material and is capable of adjustment through the instrumentality of a buckle connection 37 so as to draw the free or lower ends of the springs inwardly to reduce the size of the band or to permit the springs to move outward to increase the size of the band, this latter being the normal action of the springs.

In order to ventilate the helmet and permit the proper circulation of air, the top of the helmet is provided with an opening 38 and a ventilator cap 39 is attached thereover, said cap having a plurality of openings 40 permitting the proper circulation of air but preventing the entrance of foreign matter into the helmet through the opening 38. The air is supplied to the helmet through the medium of a pipe section 40' which is connected to the front portion of the helmet body, as shown at 41, and which is disposed in a rearwardly inclined position extending upwardly above the top of the helmet and having its lower end directed downwardly so that air supplied to the pipe from a suitable conduit connected thereto will pass into the helmet in such a manner as to prevent dust from entering through the screen and into the pipe. In this manner proper respiration is provided for, and since the ventilator 39 forms an exit, the operator will be working under extreme sanitary conditions at all times.

All of the metallic parts forming the helmet proper are stamped from sheet aluminum, thus providing for the best protection consistent with lightness and durability, and by means of the openings provided, the front or lookout of the helmet is made of ample size to allow the operator a good view of his work at all times.

The parts may be readily assembled and taken apart or the device conveniently

cleaned or repaired as the operator sees fit, and better working conditions are therefore assured.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is:—

1. A sanitary sandblast helmet, comprising a helmet body having a surrounding extension including a vizor and a front portion depending therefrom, said front portion having a lookout opening, a cover for said opening to exclude the entrance of dust and permit objects to be visible therethrough, an apron overlapping the extension of the body and overlying a portion of the body, a clamping band for securing said apron on the body, said band having independently movable end portions, means connecting said end portions to draw the band in clamping position, and means for admitting air to the helmet body and permitting the escape of the air displaced thereby.

2. A sandblast helmet, comprising a helmet body having side extensions and a front portion having an opening, a screen covering for said opening, a washable apron secured over said extensions and having an opening alining with the openings in the front portion of the helmet, a clamping band around the lower portion of the crown of the helmet to secure the apron thereto, said crown and band having co-acting beads between which the apron is held, and means connecting the free ends of the band to draw the same together.

3. A sandblast helmet of the character described, comprising an aluminum helmet body having side extensions and a front portion having an opening, a screen covering for said opening, means detachably securing said screen covering in position, a washable apron secured over said extensions and having an opening alining with the opening in the front portion of the helmet, and a removable frame for securing said apron and screen around the opening to form a tight joint.

4. A sandblast helmet of the character described, comprising an aluminum helmet body having side extensions and a front portion having an opening, a screen covering for said opening, means detachably securing said screen covering in position, a washable apron secured over said extensions and having an opening alining with the opening in the front portion of the helmet, and a clamping band around the lower portion of the crown of the helmet to secure the apron thereto.

5. A sandblast helmet of the character described, comprising an aluminum helmet body having side extensions and a front portion having an opening, a screen covering for said opening, means detachably securing said screen covering in position, a washable

apron secured over said extensions and having an opening alining with the opening in the front portion of the helmet, a removable frame for securing said apron and screen
5 around the opening to form a tight joint, a clamping band securing the apron around the helmet body, said body having a vizor with side lapovers receiving the apron therein, and a head band connected interiorly to
10 the helmet body.

6. A sandblast helmet of the character described, comprising an aluminum helmet body having side extensions and a front portion having an opening, a screen covering
15 for said opening, means detachably securing said screen covering in position, a washable apron secured over said extensions and having an opening alining with the opening in the front portion of the helmet, a removable

frame for securing said apron and screen
20 around the opening to form a tight joint, a clamping band securing the apron around the helmet body, said body having a vizor with side lapovers receiving the apron therein, and a head band connected interiorly to
25 the helmet body, said head band comprising an adjustable member and springs supporting the same.

In testimony whereof we, WILLIAM DUNCAN and JOHN A. SPANGLER, have signed
30 our names to this specification in the presence of two subscribing witnesses.

WILLIAM DUNCAN.
JOHN A. SPANGLER.

Witnesses:

ALVA LEE BEEVER,
WARD McCURDY.