

No. 622,677.

Patented Apr. 11, 1899.

E. D. GALLAGHER & T. A. HAYNES.

FIREMAN'S HELMET.

(Application filed Nov. 5, 1898.)

(No Model.)

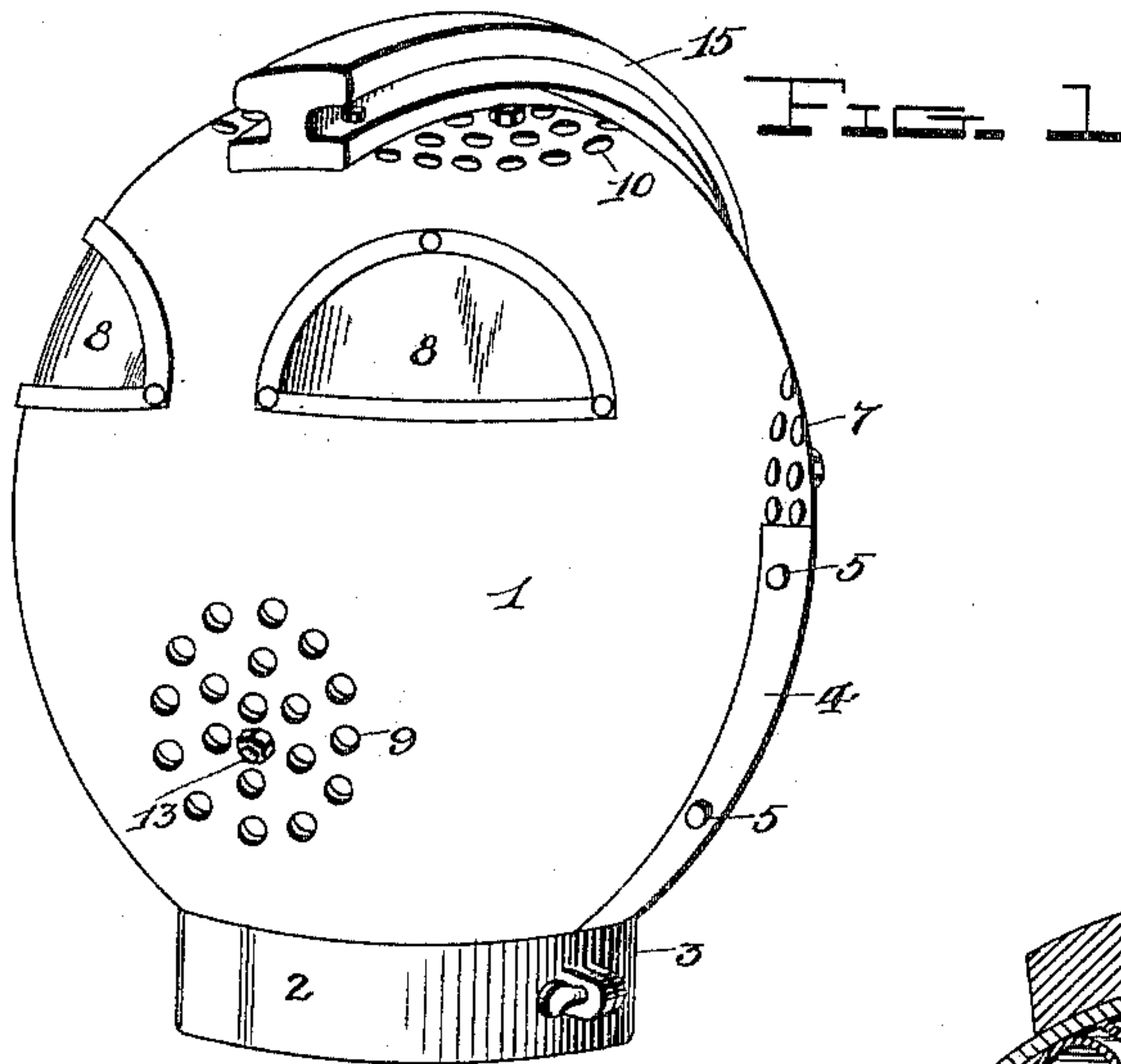


FIG. 1

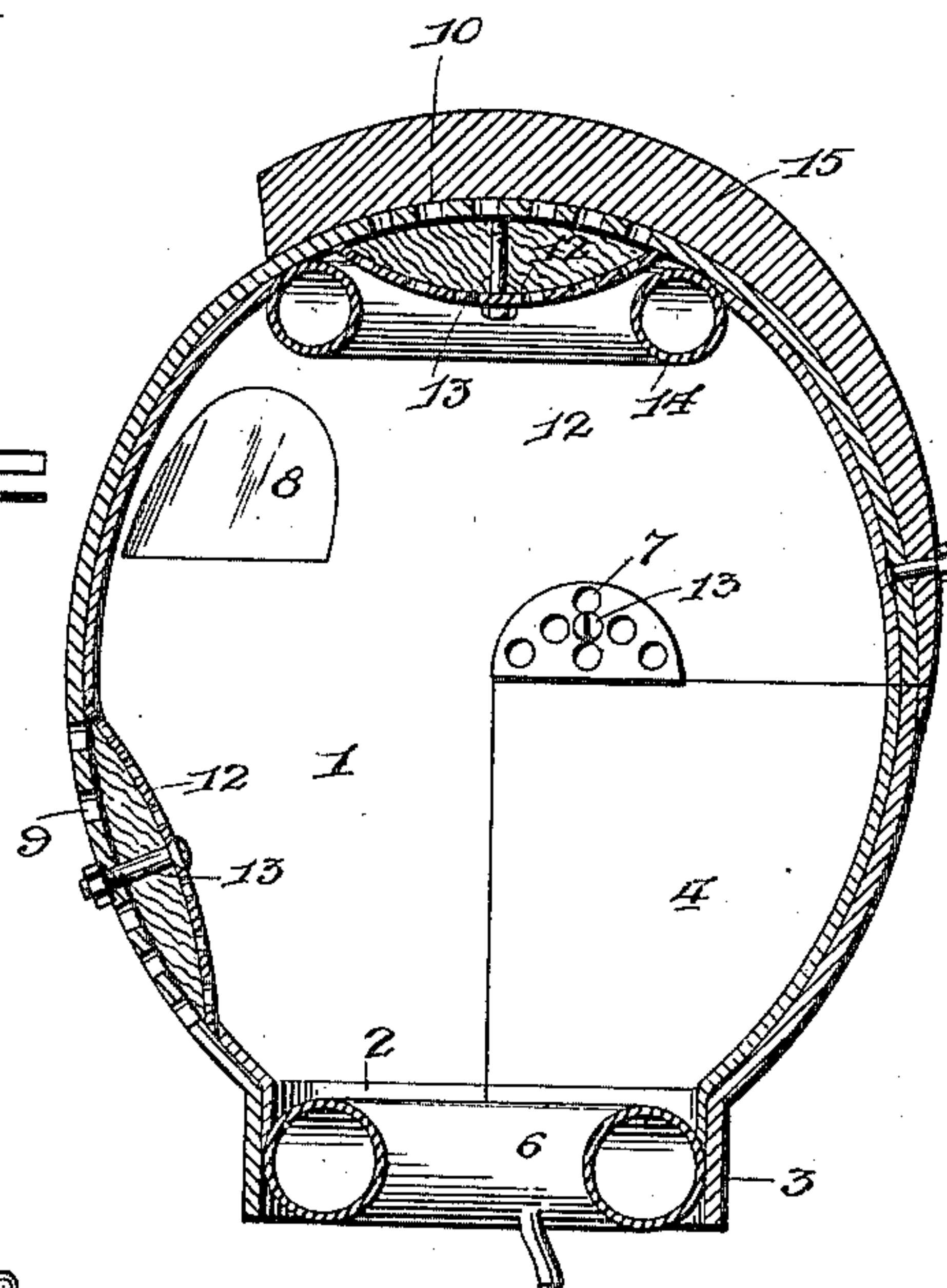


FIG. 2

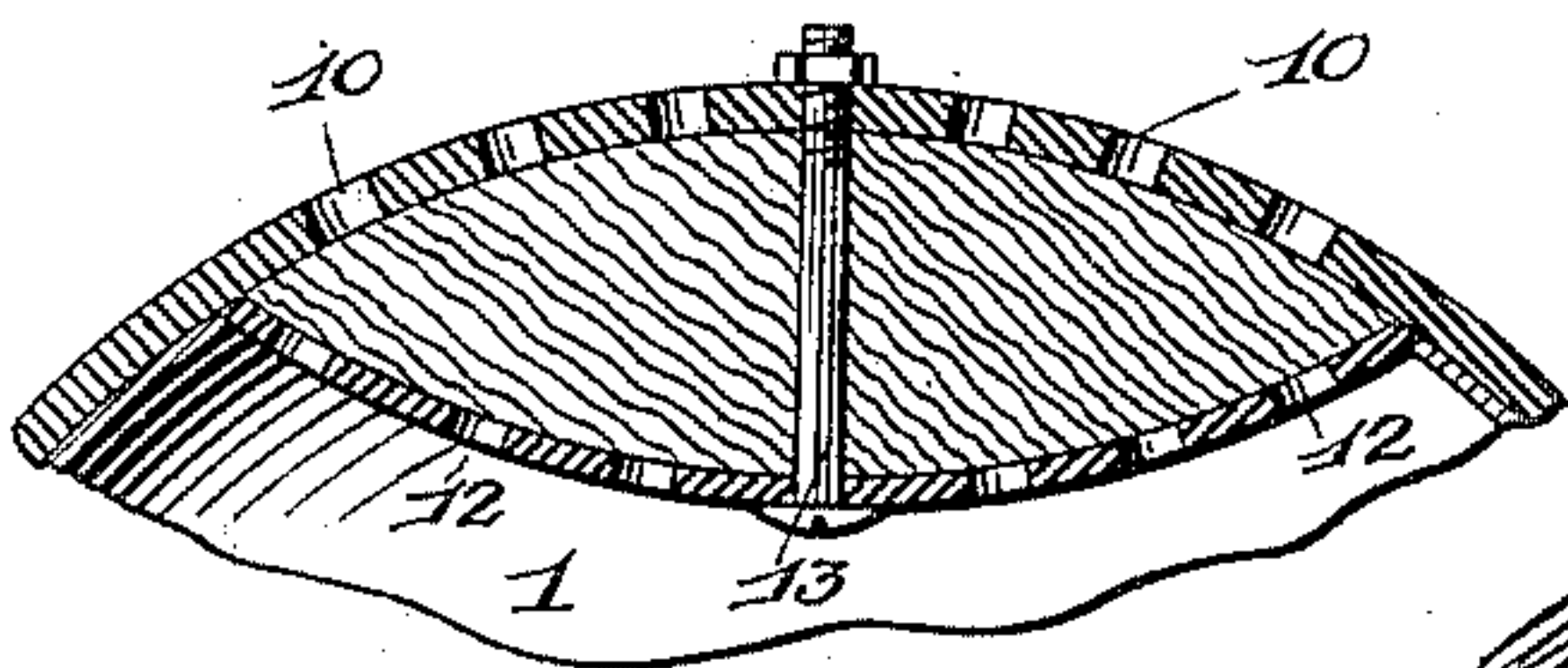


FIG. 3

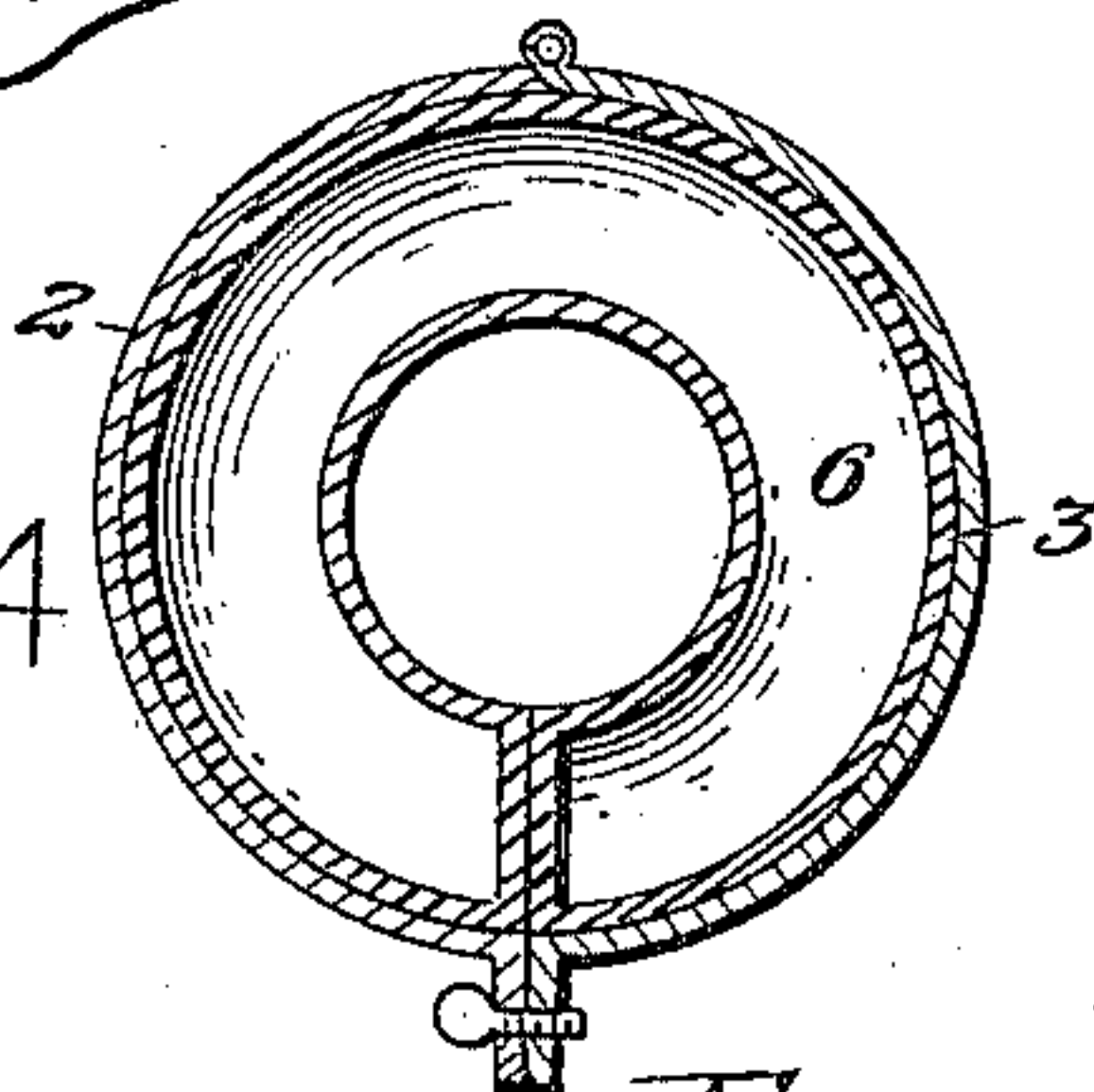


FIG. 4

Witnesses
J. L. [Signature]
J. [Signature]

Edward D. Gallagher ^{Inventors}
Thomas A. Haynes, ^{and}
by
A. B. Wilson & Co. ^{Attorneys}

UNITED STATES PATENT OFFICE.

EDWARD D. GALLAGHER AND THOMAS A. HAYNES, OF NEW YORK, N. Y.

FIREMAN'S HELMET.

SPECIFICATION forming part of Letters Patent No. 622,677, dated April 11, 1899.

Application filed November 5, 1898. Serial No. 695,572. (No model.)

To all whom it may concern:

Be it known that we, EDWARD D. GALLAGHER and THOMAS A. HAYNES, citizens of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Firemen's Protective Hel-
5 ments; and we do declare the following to be a full, clear, and exact description of the in-
10 vention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to improvements in helmets for firemen, miners, and others en-
15 gaged in dangerous work where poisonous fumes and noxious gases are present or in burning buildings where excessive heat and dangerous heat exist; and the object is to provide a simple, inexpensive, and effective
20 fireproof protective helmet of this character that shall be easy of manipulation, light and comfortable, and permit of the perfect free-
dom of head and neck when in use.

To these ends the invention consists in the
25 construction, combination, and arrangement of the several parts of the device, as will be hereinafter more fully described, and particularly pointed out in the claim.

In the accompanying drawings the same
30 reference characters indicate the same parts of the device in the several figures.

Figure 1 is a perspective view of our im-
proved fireman's protective helmet. Fig. 2
is a vertical section. Fig. 3 is an enlarged
35 sectional detail of the top of the helmet. Fig. 4 is a horizontal section through the neck-
band.

The helmet proper comprises a hood 1 of a
40 globular or elliptical form to conform to the general shape of the head, and it is formed with an annular neckband 2, which is divided, the rear portion 3 being formed integral with the door 4 of the helmet, and which is of suf-
ficient size to permit the passage of the head,
45 the door portion 4 and collar or neck-piece 3 being hinged to the body portions, and their free edges are provided with suitable clasps 5 5, which coact with the meeting edges of the body portion to form an air-tight joint.

50 The inside of the neckband is provided with a pneumatic tube or divided ring 6 to encom-
pass the neck and form a comfortable though comparatively air-tight collar to prevent the entrance of smoke or other noxious gases at
55 this point.

7 7 denote ventilators for the ears, and 8 8 mica windows for the eyes.

9 denotes the respirator for the mouth, and 10 a ventilator for the top of the head, the respirator and each ventilator consisting of a
60 perforated concave disk 12, secured to the inner concave face of the body portion by a screw 13, the corresponding body portion of the helmet being perforated and the inter-
vening space between the two walls packed
65 with sponge, absorbent cotton, or the like.

14 represents an annular inflatable or pneu-
matic cushion fixed to the inside of the hel-
met and which forms a cushion for the head
and also as a protector to prevent concussion
70 in the event of any solid bodies falling on the helmet.

15 denotes a protecting rib or molding fixed to the outside and on top of the crown of the helmet to protect and strengthen it.
75

The shell or helmet proper may be made of
any suitable metal, such as aluminium or the like, preferably lined with any soft material, such as sheepskin over a non-conducting ma-
terial, such as mineral wool, asbestos cloth,
80 or the like. In some instances the helmet may be made of cellulose or any of the various "papier-mâché" compositions rendered fireproof in any approved manner.

The accompanying drawings show our in-
85 vention in the best form now known to us; but many changes in the details might be made within the skill of a good mechanic without departing from the spirit of our invention as set forth in the claim at the end of this
90 specification.

Having thus fully described our invention, what we claim as new and useful, and desire to secure by Letters Patent of the United States, is—
95

In combination, the helmet or hood, 1, formed with a divided collar-band, and a di-
vided pneumatic collar carried by said col-
lar-band, substantially as and for the purpose
100 set forth.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

EDWARD D. GALLAGHER.
THOMAS A. HAYNES.

Witnesses:

DANIEL P. ENGLISH,
PETER MURTHA.