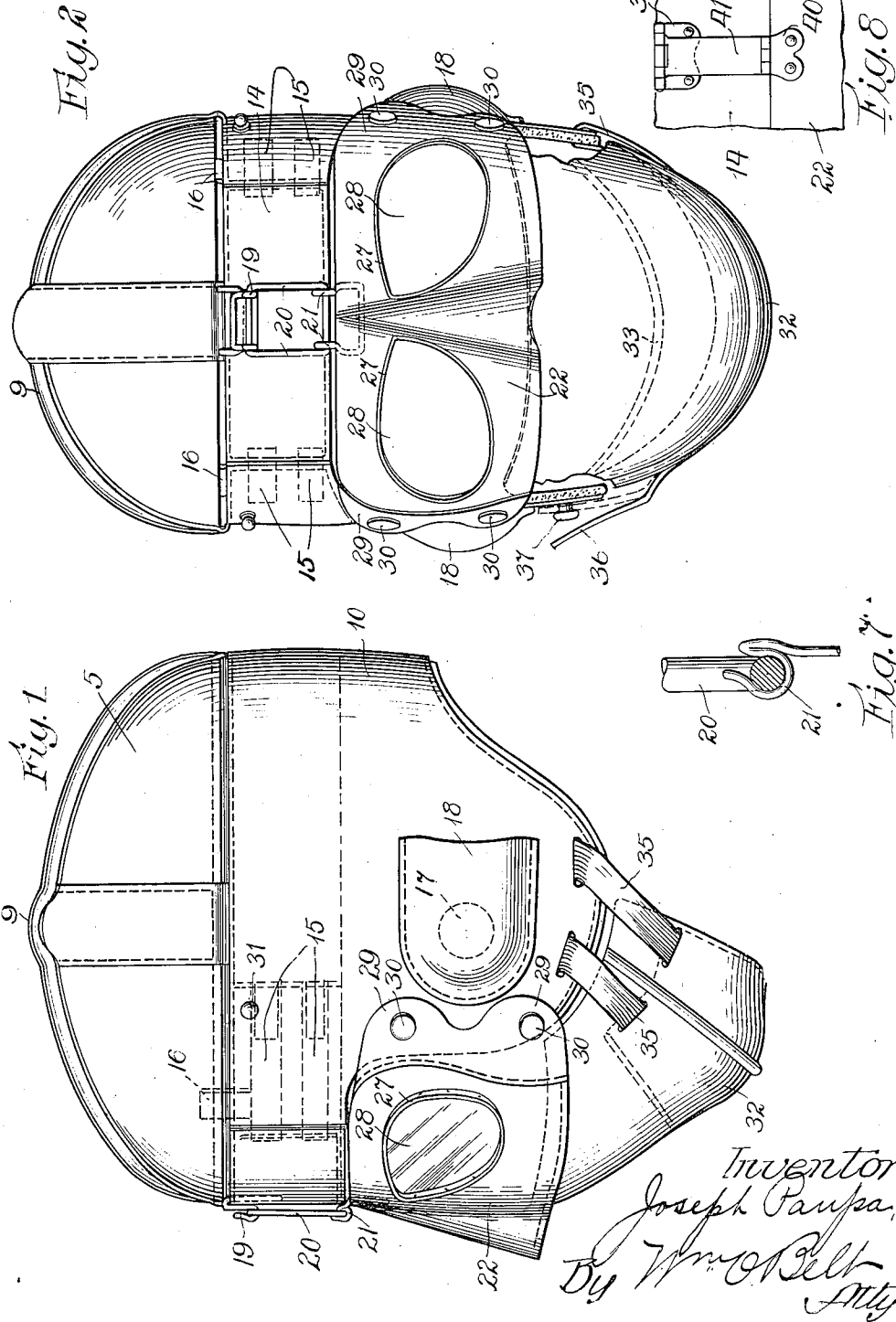


1,272,309.

Patented July 9, 1918.

2 SHEETS—SHEET 1.

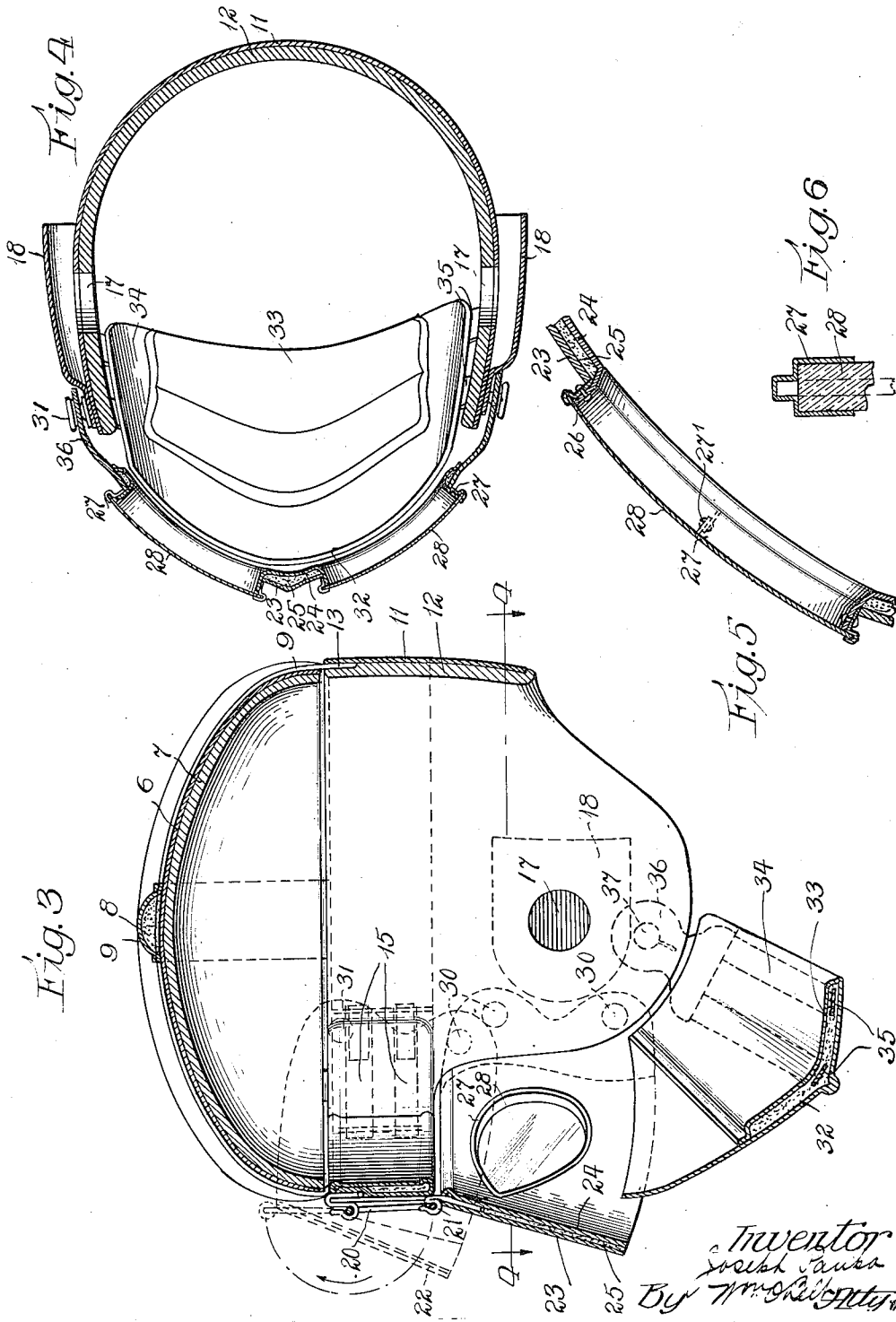


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 Atty

1,272,309.

J. PAUPA.
AVIATION HELMET.
APPLICATION FILED AUG. 25, 1917.

Patented July 9, 1918.
2 SHEETS—SHEET 2.



UNITED STATES PATENT OFFICE.

JOSEPH PAUPA, OF CHICAGO, ILLINOIS, ASSIGNOR TO THOS. E. WILSON & CO., OF CHICAGO, ILLINOIS, A CORPORATION OF MAINE.

AVIATION-HELMET.

1,272,309.

Specification of Letters Patent.

Patented July 9, 1918.

Application filed August 25, 1917. Serial No. 188,246.

To all whom it may concern:

Be it known that I, JOSEPH PAUPA, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Aviation-Helmets, of which the following is a specification.

This invention relates to helmets for aviators and has for its primary object the provision of a warm covering which will comfortably fit the head of the wearer and afford protection to the head and face without in any way interfering with the vision, hearing, etc., of the wearer.

A further object of my invention is the provision of means whereby the helmet automatically adjusts itself to the shape of the wearer's head whereby the utmost comfort is assured.

A further object of my invention is the provision of a novel eye shield constructed to permit removal of the transparent windows when broken so that others may be substituted therefor and of a novel support for said shield which permits it to be inconspicuously disposed when not in use or entirely removed, if desired.

Further objects and advantages of my invention will be apparent as it is better understood by reference to the following specification when read in connection with the accompanying drawing, illustrating the preferred embodiment thereof, in which—

Figure 1 is a side elevation of a helmet;

Fig. 2 is a front elevation thereof;

Fig. 3 is a vertical section through the helmet;

Fig. 4 is a horizontal section on the line 4—4 of Fig. 3;

Fig. 5 is an enlarged detail in section of one of the windows in the eye shield;

Fig. 6 is a detail in section of a frame for the windows;

Fig. 7 is a detail in section of the hook for connecting the eye shield to the support, and

Fig. 8 is a detail in elevation of a different form of eye shield support.

Referring to the drawing, 5 indicates a crown piece constructed of an outer layer 6, preferably of leather, and an inner layer 7

of soft material such as felt, the layers being stitched together and shaped to fit the top of the head. The crown piece 5 is reinforced by longitudinal and transverse reeds 8 covered with strips 9 of leather or other suitable material.

The head band 10 also consists of an outer layer 11, preferably of leather, and an inner layer 12 of soft material such as felt stitched together, and is connected to the crown piece 5 by the ends 13 of the strips 9 which are preferably stitched between the layers 11 and 12 as indicated in Fig. 3. The front portion 14 of the head band comprises a separate section which is connected to the main section by strips 15 of elastic material. This front portion engages the forehead of the wearer and as will be readily understood the head band is permitted by the elastic strips 15 to expand independently of the crown piece so that the head band automatically adjusts itself to the size and shape of the wearer's head. Strips 16 of leather or other suitable material stitched between the layers of the crown piece and head band hold the free ends of the head band adjacent the front portion 14 in proper relation to the crown piece.

The head band 10 is shaped to cover the ears of the wearer and is provided with holes 17 adjacent the ears. These holes are covered by housings 18 which open rearwardly and are preferably formed of leather. The ears are thus fully protected without impairing the hearing of the wearer.

The hook 19, preferably constructed of wire, is secured to the front piece 14 to receive a link 20, also preferably of wire, which engages a hook 21 connected to the eye and nose shield 22. The latter is constructed of inner and outer facings 23 and 24, preferably of leather, between which a layer 25 of soft material, such as felt, is disposed, the whole being stitched and shaped to conform in general to the contour of the face. The shield is provided with openings in front of the eyes and the edges 26 of the facing 24 about the openings are turned outwardly and riveted to metallic frames 27 which support transparent coverings 28 of glass, cellu-

loid or other suitable material. The frames 27 are preferably so constructed that glass or celluloid may be used interchangeably as shown in Fig. 6. The frames are split and fastened by screws 27'. Upon loosening these screws the frames may be sprung sufficiently to permit removal of the transparent coverings. The eye and nose shield is provided with tabs 29 having snap fasteners 30 thereon to secure the eye and nose shield in the position indicated in the drawing. When not required the eye and nose shield may be folded to the position indicated in dotted lines in Fig. 3 in which position it is held by engagement of the snap fasteners with corresponding members 31 on the head band. The link 20 may be readily removed from the hook 19 when desired so that the eye and nose shield may be temporarily discarded. Normally, however, the hook 19 grips the link 20 to secure the eye and nose shield in place. In emergencies the eye and nose shield may be quickly removed from the link 20 by pulling downwardly to release the hook 21 from the link.

A chin and mouth shield 32 is constructed of leather having a pad 33 of soft material and an inner lining 34 preferably of leather secured thereto adjacent the chin. The shield 32 is secured to the head band 10 at one side by continuous elastic strips 35 which enter slots in the leather of the shield, passing between the leather and the pad, and are connected at their ends to a tab 36 adapted to engage a button 37 on the head band 10. Thus the chin and mouth shield are resiliently and adjustably held in position when required.

In Fig. 8 I have shown a slightly different form of support for the eye and nose shield. Hinge members 39 and 40 are secured, respectively, to the front portion 14 and to the eye and nose shield 22 and are connected by a link 41. The operation of this support is identical with the wire support heretofore described except that the elements are not separable.

When the device is adjusted to the head of the wearer as indicated in the drawing, the head and face is entirely protected. At the same time the wearer is permitted to see, hear and breathe freely and may even talk without discomfort. The head band resiliently grips the head preventing discomfort from looseness or unnecessary tightness of the helmet. The chin and mouth shield may be quickly unfastened, and the eye and nose shield may be as readily moved to inoperative position where it remains until again needed or it may be entirely detached as desired. My helmet, therefore, provides numerous advantages over devices of this character heretofore in use.

It will be apparent that various changes

may be made in the form, construction and arrangement of the parts without departing from the spirit and scope of the invention or sacrificing any of its material advantages, the form hereinbefore described being merely a preferred embodiment thereof.

I claim:

1. A helmet comprising a crown piece and a head band loosely connected thereto and consisting of a plurality of loosely connected sections, an eye shield supported on said helmet and movable to and from operative position, and a chin pad resiliently connected to said head band.

2. A helmet comprising a crown piece and a head band loosely connected thereto and consisting of a main section to embrace the sides and back of the head and a front section to engage the forehead, said front section being resiliently connected to said main section, an eye shield supported on said helmet and movable to and from operative position, and a chin pad resiliently connected to said head band.

3. A helmet comprising a head covering, an eye and nose shield, a link pivotally connected to said shield and covering whereby the former may be moved upwardly to inoperative position and separate means independently connected to said head covering to protect the chin and mouth of the wearer.

4. A helmet comprising a head covering, an eye shield, and a link pivotally connected to said shield and covering whereby the former may be moved upwardly to inoperative position, the connection between said link and shield being readily disengageable to permit removal of said shield.

5. A helmet comprising a head covering, an eye shield, and a link pivotally connected to said shield and covering whereby the former may be moved upwardly to inoperative position, the connection between said link and head covering being readily disengageable to permit removal of said link and shield.

6. A helmet comprising a head covering, an eye shield, a link pivotally connected to said head covering, and a hook on said shield normally gripping said link and disengageable therefrom by a downward pulling force applied to said shield.

7. A helmet comprising a head covering, an eye shield, a link, a hook on said head covering normally gripping one end of said link, said shield being pivotally connected to the other end of said link to permit movement of said shield to inoperative position.

8. A helmet comprising a head covering, an eye shield, a link connecting said shield and covering, and a chin pad separate from said shield and resiliently connected to said covering.

9. A helmet comprising a crown piece, an
expansible head band, an eye and nose
shield, a link connecting said shield to said
head band, and a chin pad separate from
5 said eye and nose shield resiliently con-
nected to said head band and carrying a
mouth covering, the several parts being so

formed as to completely inclose the head
and face of the wearer when adjusted to
operative position.

JOSEPH PAUPA.

Witnesses:

WM. O. BELT.

M. A. KIDDIE.