

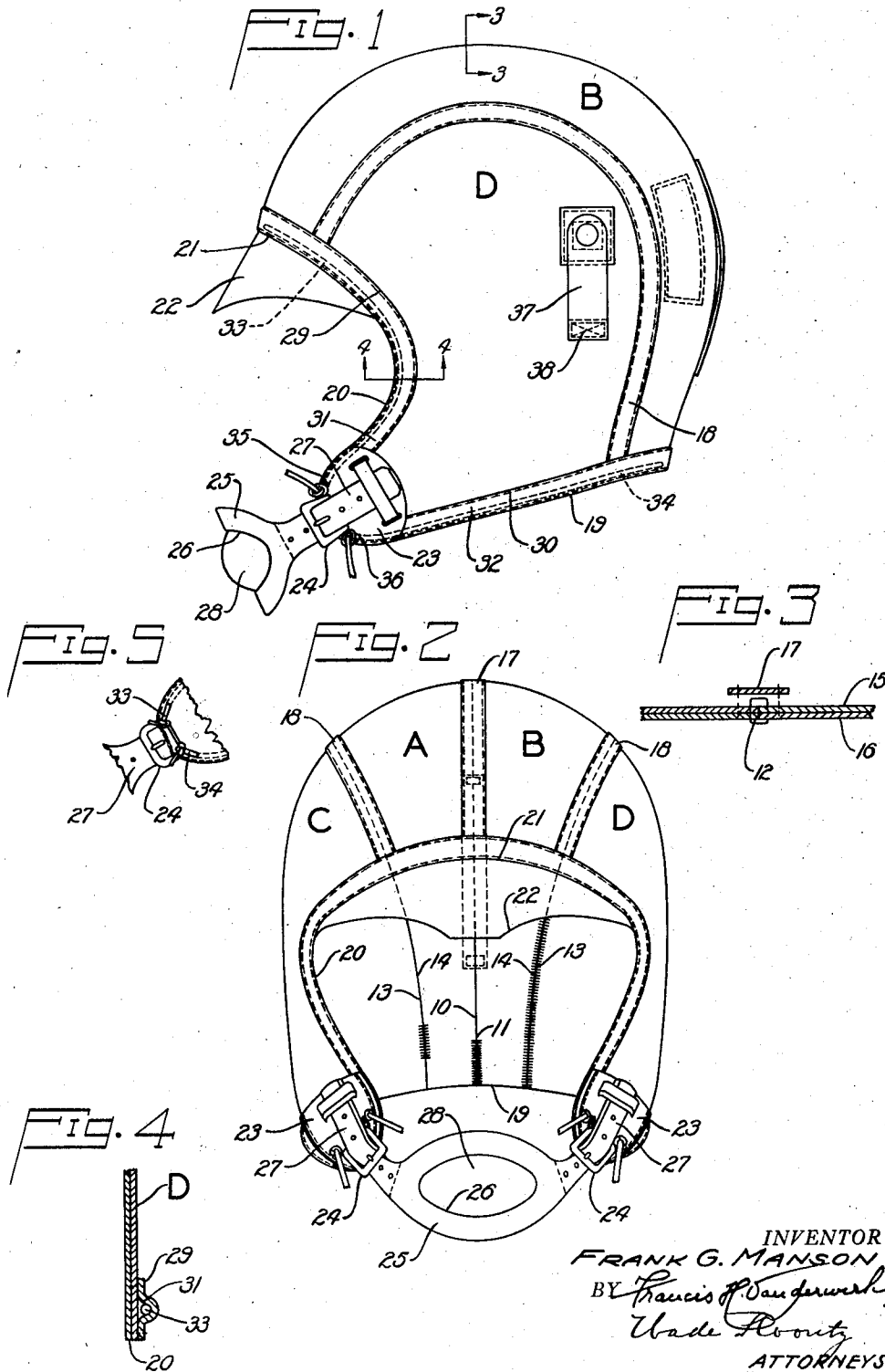
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F. G. MANSON

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HELMET

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HELMET

Frank G. Manson, Dayton, Ohio

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The invention described herein may be manufactured and used by or for the Government for governmental purposes, without the payment to me of any royalty thereon.

5 The present invention relates generally to helmets such as are adapted to be worn by aviators and the primary object of the present invention is to provide a helmet constructed of a plurality of sections, the meeting edges of which are adapted to be secured together in such a manner that
10 the sections may be accurately cut to obtain an accurately shaped helmet which will fit the particular head upon which it is worn, and in which the inrush of air about the face and particularly
15 about the face and neck regions is effectively prevented.

A further object of the present invention is to provide in a helmet of this character, means for effectively excluding rushes and gusts of air
20 and one that is capable of being fitted against the face and neck portions regardless of the contour of the face and neck of the wearer.

A further object of the present invention is to provide a helmet in which fluttering and other
25 annoying movements between the inner and outer layers of the helmet cannot occur.

Heretofore helmets have been made with portions enclosing the head and ears of the wearer, the ear portions approaching each other beneath
30 the chin where some form of fastening device has been located. This has resulted in a bunching of parts beneath the chin, as well as the presence there of fastening devices which are awkward to get at or in the way and are most
35 uncomfortable by reason of the degree of adjustment necessary to keep the head and ear portions of the helmet accurately fitted to the face of the wearer.

It is, therefore, a further object of the present
40 invention to provide a helmet of this character with depending portions which cover the ears and which are adapted to be extended towards one another adjacent the chin, a removable
45 chin strap adapted to cover the chin portions of the wearer's face being provided, which is adjustably connected to the depending portions of the helmet at each end to permit the chin strap to be centrally located on the chin of the wearer.
50 By fastening the chin strap to the depending portions of the helmet in this manner, the helmet is not only comfortably retained securely in place upon the head of the wearer, but it permits the wearer free movement of the jaw, eliminating entirely the annoyances resulting from chin straps
55 heretofore in use.

These and other objects of the invention will be more apparent from the following detail description of a preferred embodiment illustrated in the accompanying drawing, in which:

Fig. 1 is a plan view of a helmet constructed
6 in accordance with the principles of the present invention;

Fig. 2 is a front view thereof;

Fig. 3 is a section taken on the line 3—3 of
Fig. 1;

Fig. 4 is a sectional view taken on the line
4—4 of Fig. 1; and

Fig. 5 is a modification of the chin strap portion of the helmet shown in Fig. 1.

Referring more particularly to the drawing
15 wherein corresponding parts are designated by like numerals throughout the several views thereof, the helmet in the preferred embodiment of my invention, herein illustrated, is constructed of the two top sections A and B and the two side
20 sections C and D, which are cut to closely conform to the shape of the wearer's head when assembled. The top sections A and B are similarly shaped, the corresponding edges 10 and 11 of
25 which are attached together by a butt-joint seam 12 extending from front to rear of the helmet, the path of which lies in the plane of symmetry of the helmet. The two side sections C and D are also similarly shaped, the edges 13 of which are
30 attached to the corresponding edges 14 of each top section by a butt-joint seam. The sections of the helmet are laminated, that is, each is formed of an outer layer 15 of durable material such as leather, and an inner lining 16 of warm
35 material, such as chamois, fur, or the like. The outer layer 15 and the inner lining 16 are cemented together to form a laminated structure and in so doing objectionable fluttering, by which is meant a rapid vibration of the outer layer with
40 respect to the inner lining, is prevented when the head is exposed to the air-stream. Reinforcing strips 17 and 18 are secured to the outer layer and adapted for covering the seams between the sections of the helmet, as illustrated in Figs.
45 1 and 2. In a like manner, the edges of the neck opening 19 and face opening 20 are reenforced by a binding of leather. Also, as will be noted by referring to Figs. 1 and 2, the upper portion 21
50 of the face opening is provided with a depending vizor 22, adapted to completely cover the forehead, the lower edge of which is shaped to conform to the eyes of the wearer.

The lower forward portion of each side section is tapering in shape with the apex of the
55 tapering portion extending towards the chin of

the wearer. The end of each tapering portion, as shown in Fig. 1, has secured thereto a reenforcing disc 23 of stiff leather, such as cowhide, to which is secured suitable fastening devices such as buckles 24. A chain strap 25 is provided, the central portion of which is cut-away to form an opening 26 for receiving the chin, the outer ends 27 of said chin strap being adapted for adjustable connection with the buckles 24. As will be noted by referring to Fig. 1, a cup-shaped piece of soft material 28, such as chamois or the like, is suitably secured at its edges to the edges of the opening 26 by cement or other suitable material. By providing a chin strap of this construction, free movement of the jaw is permitted and at the same time the helmet is maintained securely in place on the head of the wearer. The binding strips of leather herein indicated by numerals 29 and 30, are each secured to the edges of the face and neck openings by stitching along the side edges of the binding strips only to provide open spaces indicated by numerals 31 and 32, which follow the contour of the face and neck openings. Cords 33 and 34 are adapted to be threaded through the spaces thus formed, the ends of which are passed through openings 35 and 36 formed in the reenforcing discs 23. In adjusting the helmet to the head of the wearer, the cords in being pulled taut, tend to uniformly contract or crimp the edges of the face and neck opening and thus cause the same to conform to the shape of the face and neck of the wearer. The cords are then knotted at their ends, as shown in Fig. 1. By providing cords of this nature adjacent to the face and neck opening, the tendency of the leather to stretch is substantially prevented and an accurate fit of the helmet is maintained. Consequently, when the chin strap is drawn taut about the chin, the face and neck openings will tend to conform to the shape of the face and neck, without any objectionable puckering of the edges of the face and neck openings of the helmet.

The two side sections C and D are also provided with goggle-retaining straps 37, sewed at one end, as indicated by numeral 38, to the side sections, the free ends of the latter being provided with any well-known, quickly detachable fastening device, such as, for example, glove button fasteners.

A modified form of the invention is illustrated in Fig. 5, wherein the ends of the cords 33 and 34 are anchored to the buckles 24 instead of securing the buckles to the reenforcing discs 23 heretofore mentioned. Consequently, when adjusting the chin strap snugly on the chin of the wearer, an even pull is given to the cords to cause the edges of the material adjacent to the face and neck openings to be uniformly contracted, and to accurately conform these openings to the wearer's head without causing any discomfort to the wearer.

Various other modifications may be made in the materials, particular manner of assembly, and details of construction without departing from the spirit of the invention. It is, therefore, to be understood that although the invention has been described in considerable detail, such description is intended as illustrative rather than limiting as the invention may be variously embodied and as the scope of the invention is to be determined as claimed.

I claim:

1. An aviator's helmet comprising, a plurality of sections cut to conform to the shape of the

head and provide a face opening and a neck opening when in assembled relation, the meeting edges of said sections being adapted to be secured together to form butt-joint connections therebetween, and means freely and relatively movable with respect to the peripheral edges of said face and neck openings for uniformly contracting the adjacent materials forming said openings.

2. An aviator's helmet comprising, a plurality of sections cut to conform to the shape of the head and provide a face opening and a neck opening when in assembled relation, the meeting edges of said sections being adapted to be secured together to form butt-joint connections therebetween, and adjustable means freely and relatively movable with respect to the peripheral edges of said face and neck openings for uniformly contracting the adjacent materials forming said openings.

3. An aviator's helmet comprising, a plurality of sections cut to conform to the shape of the head and provide a face opening and a neck opening when in assembled relation, the meeting edges of said sections being adapted to be secured together to form butt-joint connections therebetween, and draw cords positioned adjacent to and extending continuously around the face and neck openings respectively of said helmet for uniformly drawing taut the portions of the helmet adjacent to the face and neck openings to conform said openings to the shape of the face and neck of the wearer.

4. An aviator's helmet comprising, a pair of top sections extending from front to rear of said helmet, and a pair of side sections, one for each side of the head, the meeting edges of the top and side sections being secured together to form butt-joint connections therebetween, each of the side sections of said helmet being provided with a depending tapering portion adapted to extend towards the chin of the wearer, a removable chin strap, and adjustable means associated with the end of each depending portion for attaching said chin strap thereto.

5. An aviator's helmet comprising, a pair of top sections extending from front to rear of said helmet, and a pair of side sections, one for each side of the head, the meeting edges of the top and side sections being secured together to form butt-joint connections therebetween, each of the side sections of said helmet being provided with a depending forward portion tapering towards the chin of the wearer, a removable chin strap provided with a central portion adapted for accommodating the chin and fastening means secured at the end of each depending portion for adjustably connecting the end portions of said chin strap thereto.

6. An aviator's helmet comprising, a pair of top sections extending from front to rear of said helmet, and a pair of side sections, one for each side of the head, the meeting edges of the top and side sections being secured together to form butt-joint connections therebetween, each of the side sections of said helmet having a tapering lower portion adapted to extend towards the chin of the wearer, a chin strap provided with a cup-shaped portion of soft warm material for accommodating the chin, and fastening means secured at the ends of the tapering portions of said side sections for adjustably connecting said chin strap thereto.

7. An aviator's helmet comprising, a pair of top sections extending from front to rear of said helmet, and a pair of side sections, one for

each side of the head, the meeting edges of the top and side sections being secured together to form butt-joint connections therebetween, said sections providing, when secured together, a face opening and a neck opening, each of the side sections of said helmet being provided with a depending forward portion tapering towards the chin of the wearer, the ends of each tapering portion having secured thereto a reinforcing element, a chin strap, fastening means secured to said reinforcing elements for adjustably connecting said chin strap thereto, and adjustable draw cords positioned adjacent to the face and neck openings of said helmet for uniformly drawing taut the portions of the helmet adjacent to the face and neck openings to conform said portions to the shape of the face and neck of the wearer, the ends of said draw cords being adapted to be adjustably secured to said reinforcing elements.

8. An aviator's helmet comprising, a pair of top sections extending from front to rear of said helmet, and a pair of side sections, one for each side of the head, the meeting edges of the top and side sections being secured together to form butt-joint connections therebetween, said sections providing, when secured together, a face opening and a neck opening, each of the side sections of said helmet being provided with a depending forward portion tapering towards the chin of the wearer, the ends of each tapering portion having secured thereto a reinforcing element, a chin strap, fastening elements associated with the ends of each depending portion for attaching said chin strap thereto, and adjustable draw cords positioned adjacent to the face and neck openings of said helmet, the ends of the draw cords being secured to said fastening elements for uniformly drawing taut the edges of the face and neck openings to conform the same to the face and neck of the wearer when said chin strap is drawn taut on the chin.

9. An aviator's helmet comprising, a pair of top sections extending from front to rear of said helmet, and a pair of side sections, one for each side of the head, the meeting edges of the top and side sections being secured together to form butt-joint connections therebetween, each of the side sections of said helmet being provided with a depending tapering portion adapted to extend towards the chin of the wearer, a removable chin strap, and means associated with the end of each depending portion for pivotally attaching said chin strap thereto in different degrees of adjustment to obtain a pivoting action between said chin strap and the side sections of said helmet and permit free movement of the jaw of the wearer.

10. An aviator's helmet comprising, a pair of top sections extending from front to rear on said helmet, and a pair of side sections, one for each side of the head, the meeting edges of the top and side sections being secured together to form a butt-joint connection therebetween and provide, when assembled, a face opening and a neck opening, each of the side sections of said helmet being provided with a depending portion adapted to extend towards the chin of the wearer, a chin strap, fastening means associated with the end of each depending portion for attaching said

chin strap thereto and means cooperating with said last-mentioned means for uniformly contracting the face and neck openings of said helmet and conform said openings to the shape of the face and neck when said chin strap is adjusted to the chin of the wearer.

11. An aviator's helmet comprising, a pair of top sections extending from front to rear of said helmet, and a pair of side sections, one for each side of the head, the meeting edges of the top and side sections being secured together to form a butt-joint connection therebetween and provide, when assembled, a face opening and a neck opening, each of the side sections of said helmet being provided with a depending portion adapted to extend towards the chin of the wearer, a chin strap, fastening means associated with the end of each depending portion for attaching said chin strap thereto, and means disposed adjacent to the edges of the face and neck openings of said helmet, and relatively movable with respect thereto, for uniformly contracting the face and neck openings and conform said openings to the shape of the face and neck of the wearer when said chin strap is adjusted to the chin of the wearer.

12. An aviator's helmet comprising, a pair of top sections extending from front to rear on said helmet, and a pair of side sections, one for each side of the head, the meeting edges of the top and side sections being secured together to form a butt-joint connection therebetween and provide, when assembled, a face opening and a neck opening, each of the side sections of said helmet being provided with a depending portion adapted to extend towards the chin of the wearer, a chin strap, fastening means associated with the end of each depending portion for attaching said chin strap thereto, and draw cords disposed adjacent to the edges of the face and neck openings of said helmet and relatively movable with respect thereto, the ends of said cords being adjustably secured to the outer ends of the depending portion of the side sections of said helmet, adapted when adjusted to effect a uniform contracting of the face and neck openings of said helmet and conform said openings to the shape of the face and neck when said chin strap is adjusted to the chin of the wearer.

13. An aviator's helmet comprising, a pair of top sections extended from front to rear of said helmet, and a pair of side sections, one for each side of the head, the meeting edges of the top and side sections being secured together to form butt-joint connections therebetween and provide, when assembled, a face opening and a neck opening, each of the side sections of said helmet being provided with a depending portion adapted to extend toward the chin of the wearer, draw cords disposed adjacent to the edges of the face and neck openings of said helmet, and relatively movable with respect thereto, a chin strap, and fastening elements secured to the ends of said draw cords to which said chin strap is adapted to be adjustably connected to hold said helmet in place on the wearer's head and simultaneously uniformly contract the face and neck openings of the helmet and conform said openings to the face and neck of the wearer.

FRANK G. MANSON.