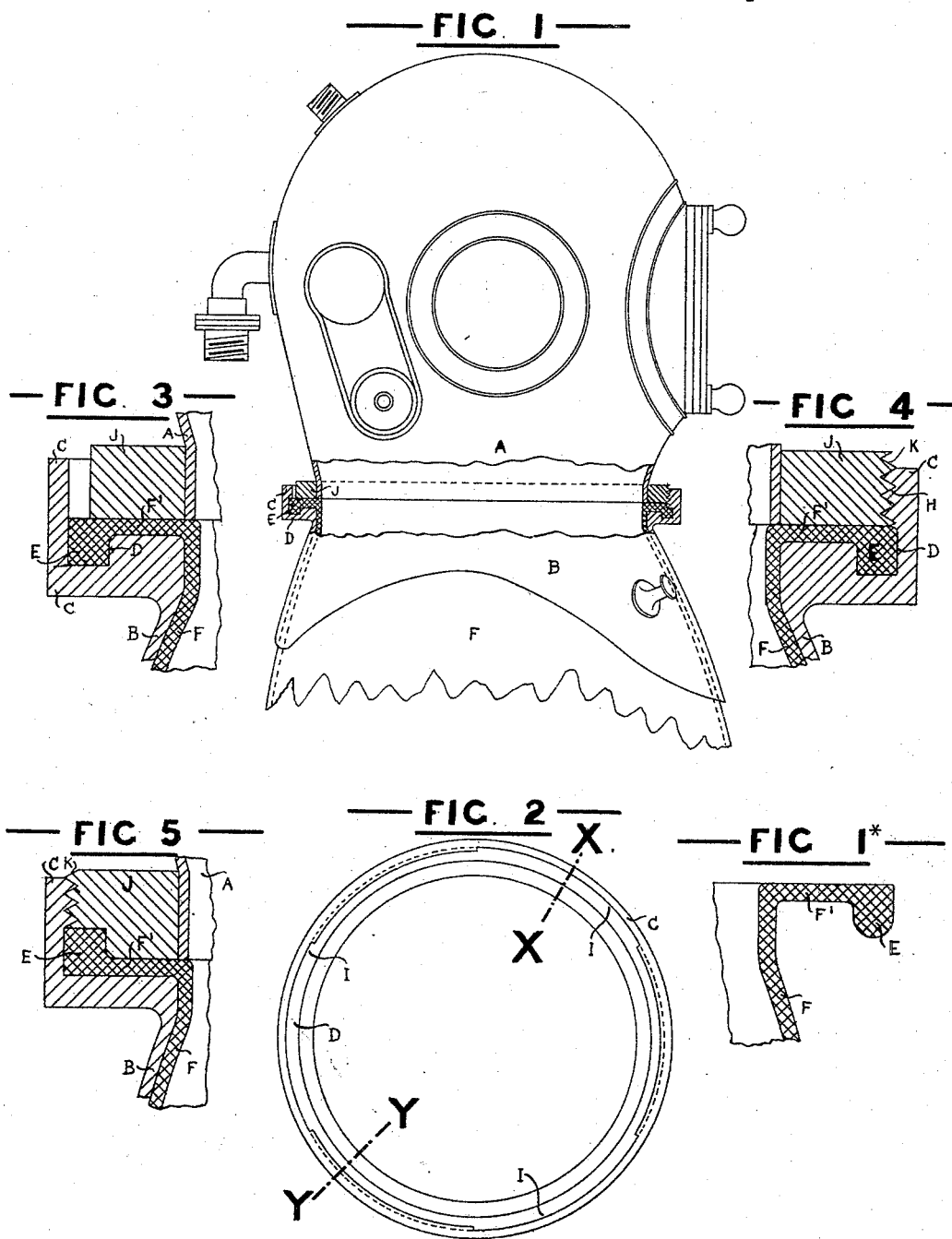


(No Model.)

A. E. STOVE.  
MEANS FOR ATTACHING HELMETS AND BREASTPLATES TO DIVING DRESSES.

No. 458,750.

Patented Sept. 1, 1891.



Witnesses.  
*J. H. Barnes*  
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— Inventor —  
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# UNITED STATES PATENT OFFICE.

ALFRED E. STOVE, OF LONDON, ENGLAND.

MEANS FOR ATTACHING HELMETS AND BREAST-PLATES TO DIVING-DRESSES.

**SPECIFICATION** forming part of Letters Patent No. 458,750, dated September 1, 1891.

Application filed January 7, 1891. Serial No. 377,012. (No model.) Patented in England October 27, 1888, No. 15,498; in France March 2, 1889, No. 196,424, and patent of addition March 21, 1889; in Germany March 5, 1889, No. 49,694; in Belgium April 13, 1889, No. 85,819, and in Italy June 30, 1889, No. 25,584/324.

*To all whom it may concern:*

Be it known that I, ALFRED EDWIN STOVE, a subject of the Queen of Great Britain, and residing at 11 Queen Victoria Street, in the city of London and Kingdom of Great Britain, have invented an Improved Means for Attaching and Screwing Helmets and Breast-Plates to Diving-Dresses, (patented in England October 27, 1888, No. 15,498; in France March 2, 1889, No. 196,424, and patent of addition March 21, 1889; in Belgium April 13, 1889, No. 85,819; in Germany March 5, 1889, No. 49,694, and in Italy June 30, 1889, No. 25,584/324,) of which the following is a specification.

This invention relates to improved means for attaching the helmet and breast-plate to the upper part or collar of a diving-dress. This connection has heretofore been effected by means of screw bolts or studs and nuts, and is found to be troublesome and to require considerable time and care to effect properly.

According to my invention I make the connection without any bolts or studs and nuts whatever by means of a kind of screw bayonet-joint, in combination with a peculiarly-shaped collar on the diving-dress, as shown in the drawings hereto annexed, in which—

Figure 1 is a side elevation of a diving helmet and breast-plate and the upper part of a diving-dress with portions of the helmet and breast-plate broken away, so as to show the connecting parts in section. Fig. 1\* is a sectional view, on a larger scale, of a portion of the upper part of the diving-dress. Fig. 2 is a plan of the upper part or collar of the breast-plate with the helmet removed. Figs. 3 and 4 are enlargements of the sections of the joint shown in Fig. 1, and correspond, respectively, to sections taken on the line X X and Y Y of Fig. 2. Fig. 5 is a similar view illustrating a slightly-modified form of this joint.

A is the helmet, and B the breast-plate; C, a circular metallic ring forming the upper part or collar of the breast-plate and having a groove D formed therein to receive the fillet or lip E, surrounding the india-rubber flanged upper part or collar F' of the dress F. The

ring C is rabbeted out, as shown, and has a screw-thread H formed in the vertical side of the said rabbet. This screw-thread is cut away at three or more points equidistant round the circumference of the rabbet, as shown at I in Fig. 2.

J is a circular metallic ring formed with or brazed to the lower part of the helmet and having a screw-thread K formed on its outer periphery corresponding to the internal screw-thread H in the ring C. The screw-thread K on the ring J is cut away at three or more points equidistant round the periphery corresponding to the parts of the thread H in the ring C which have not been cut away.

It will now be understood that when it is desired to effect the connection of the helmet to the dress and breast-plate the upper part or collar F' of the dress F is placed in position in the ring C, so that the fillet E, Fig. 1\*, enters the groove D, as shown in Figs. 1, 3, and 4. The helmet is then placed with its ring J in the rabbet of the ring C by passing the portions of the screw-thread K which remain on the ring J into the spaces I in the screw-thread H of the ring C, the parts of the screw-thread H on the ring C which have not been cut away corresponding with those parts on the ring J where the thread K has been cut away. The helmet is then turned round about a sixth of a revolution in the ring C, so that the screw-threads H and K engage with one another, causing the ring J to squeeze the upper flanged part F' of the dress F firmly between itself and the ring C, so as to form a water-tight joint. The fillet E of the dress F being pressed into the groove D prevents the collar of the said dress from being drawn out from between the rings C and J.

When it is desired to remove the helmet, it is only necessary to turn it back about a sixth of a revolution until the screw-threads on the ring J become disengaged from those on the ring C, when the helmet can be lifted out of the latter, and then the collar F' of the dress F, if required, without removing any nuts or screws whatever, whereby considerable time is saved and great convenience secured.

If preferred, the fillet E may be formed on the upper side of the flange F' of the dress F and be made to take into a groove or rabbet on the ring J of the helmet, as shown in Fig. 5, instead of into a groove in the ring C of the breast-plate, as shown in Figs. 1, 3, and 4.

I claim—

1. The improved means of attaching the helmet and breast-plate to a diving-dress, which consists of a screwed ring J on the helmet and a corresponding screwed ring C on the breast-plate, forming together a screw bayonet-joint, in combination with a diving-dress, the upper part or collar of which is formed with a flanged part F', which takes between the said rings J and C, substantially

as hereinbefore described, and illustrated in the drawings, and for the purposes specified.

2. The improved diving-dress, the upper part or collar F of which is provided with a flange F' and a fillet or lip E, substantially as hereinbefore described, and illustrated in the drawings, and for the purposes specified.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

ALFRED E. STOVE.

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