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C. F. DE LASAUX
STRATOSPHERE FLYING SUIT
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FIG. 1

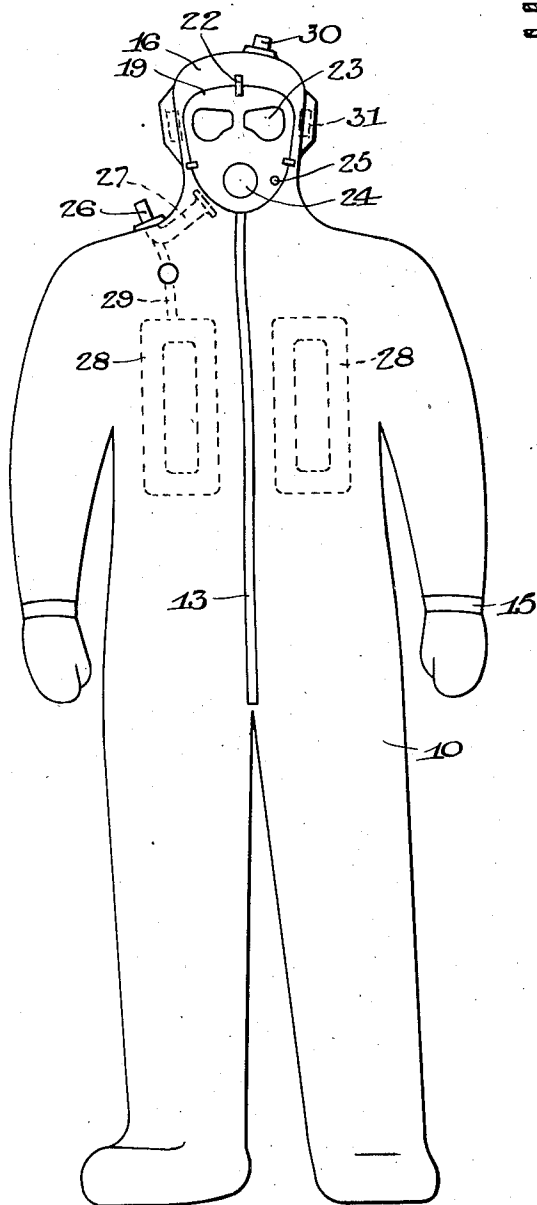
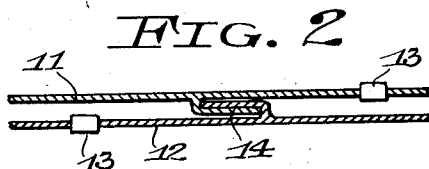


FIG. 3

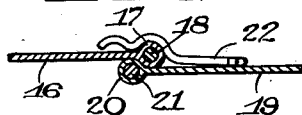
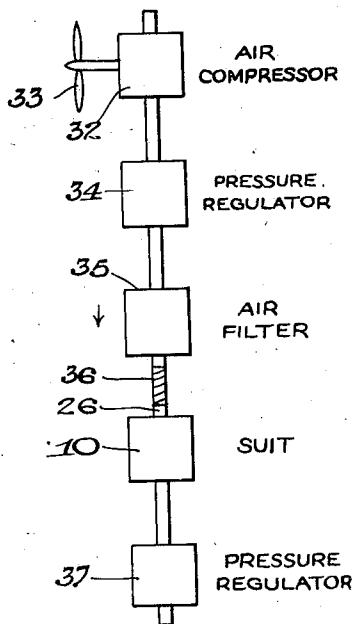


FIG. 4



WITNESSES

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STRATOSPHERE FLYING SUIT

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2 Claims. (Cl. 128-144)

The invention relates to flying clothes for use at great altitudes, as in the stratosphere, and has for an object the provision of a suit within which a supply of fresh air can be maintained at a uniform pressure substantially that of the atmosphere at sea level, thereby furnishing an airman using the suit with the air necessary for comfortable breathing and avoiding the great discomfort experienced under rapid changes of pressure incident to steep climbs and fast dives.

The invention further consists in the several features hereinafter described and claimed.

In the accompanying drawing,

Fig. 1 is an elevation of a flying suit embodying the invention;

Fig. 2 is a detail transverse sectional view of fastening means for the suit;

Fig. 3 is a detail sectional view of a detachable mask connection, and

Fig. 4 is a schematic diagram of the air supplying means for the suit.

In this drawing, the numeral 10 designates a one-piece suit which is formed of a flexible reinforced composition of rubber and fabric and which may be stayed if desired. The suit is made in step-in style and the front has double walls 11 and 12 each closed by a slide-fastener 13, there being an interlocking connection 14 between the walls adapted to be sealed by pressure within the suit. Elastic sealing bands 15 may be used around the arms and similar bands may, if desired, be used around the legs. A hood or helmet 16 is formed on the suit and has a mask-receiving opening at its front provided with a surrounding bead 17 enclosing a wire 18.

A mask 19 is mounted in the hood in register with the hood opening and has a marginal bead 20 enclosing a wire 21. The mask 19 is detachably secured to the hood by spring-urged locking levers 22, and the beads 17 and 20 are retained in sealing engagement by air pressure within the suit. The mask carries goggles 23, preferably of the frost-proof type, a speaking unit 24 such as a microphone, and an emergency air outlet 25.

The suit is provided with a fresh air inlet 26 which is connected by an internal conduit 27 terminating near the mouth of the person using the suit. Air cells 28 are formed in the suit to

form a life preserver and are adapted to be inflated by the user through one or more tubes 29. An air outlet 30 is carried on the top of the hood 15 and ear telephones 31 are carried at the sides of the hood.

The fresh air for the suit is supplied by a suitable air compressor 32, here indicated to be driven by an air screw 33. The air is delivered through a pressure regulator 34 and an air filter 35 and thence through a flexible conduit 36 to the suit. The outgoing foul air passes through a pressure regulator 37 maintaining the air within the suit at a predetermined pressure, preferably that of the atmosphere at sea level, although other comfortable pressures may be used. The pressure regulator 37 may be embodied in the air outlet 30 on the helmet. The air entering the compressor is quite cold at great altitudes, but is heated by compression and agitation in the compressor and may be further heated if desired. The proportion of oxygen in the atmosphere is substantially the same up to an altitude of about 120,000 feet so that when the rarefied air is compressed to sea level pressure, the normal proportion of oxygen will be present. If desired, the suit may be electrically heated in any well-known manner.

What I claim as new and desire to secure by Letters Patent is:

1. A flying suit for great altitudes comprising an envelope adapted to fit about a wearer and adapted to hold air at a pressure substantially greater than the ambient rarefied air, said suit having a head-receiving hood provided with a front opening, and a vision-affording mask detachably covering said opening and bearing at its edges against the inner surface of the hood to resist air pressure within the hood.

2. A flying suit for great altitudes comprising an envelope to fit about a wearer and to hold air at a pressure greater than the surrounding air pressure, said envelope having inner and outer walls with a separable interlocking connection between them, and each of said walls having a multiple-operated fastener adjacent said interlocking connection to admit the wearer into the envelope.

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