

1,127,632.

Patented Feb. 9, 1915

2 SHEETS-SHEET 1.

Fig. 1.

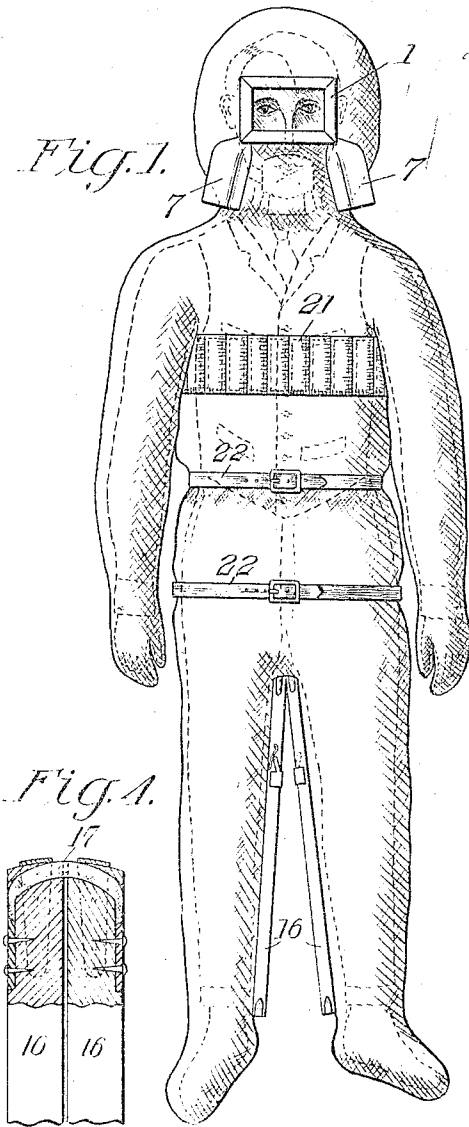


Fig. 4.

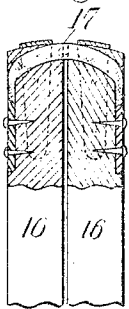


Fig. 2.

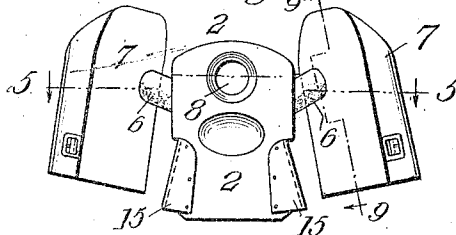


Fig. 3.

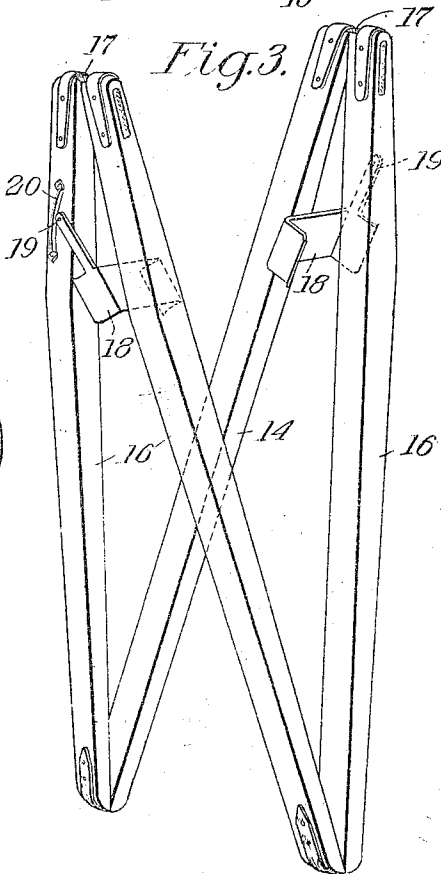
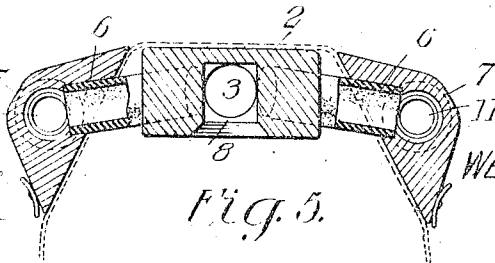


Fig. 5.



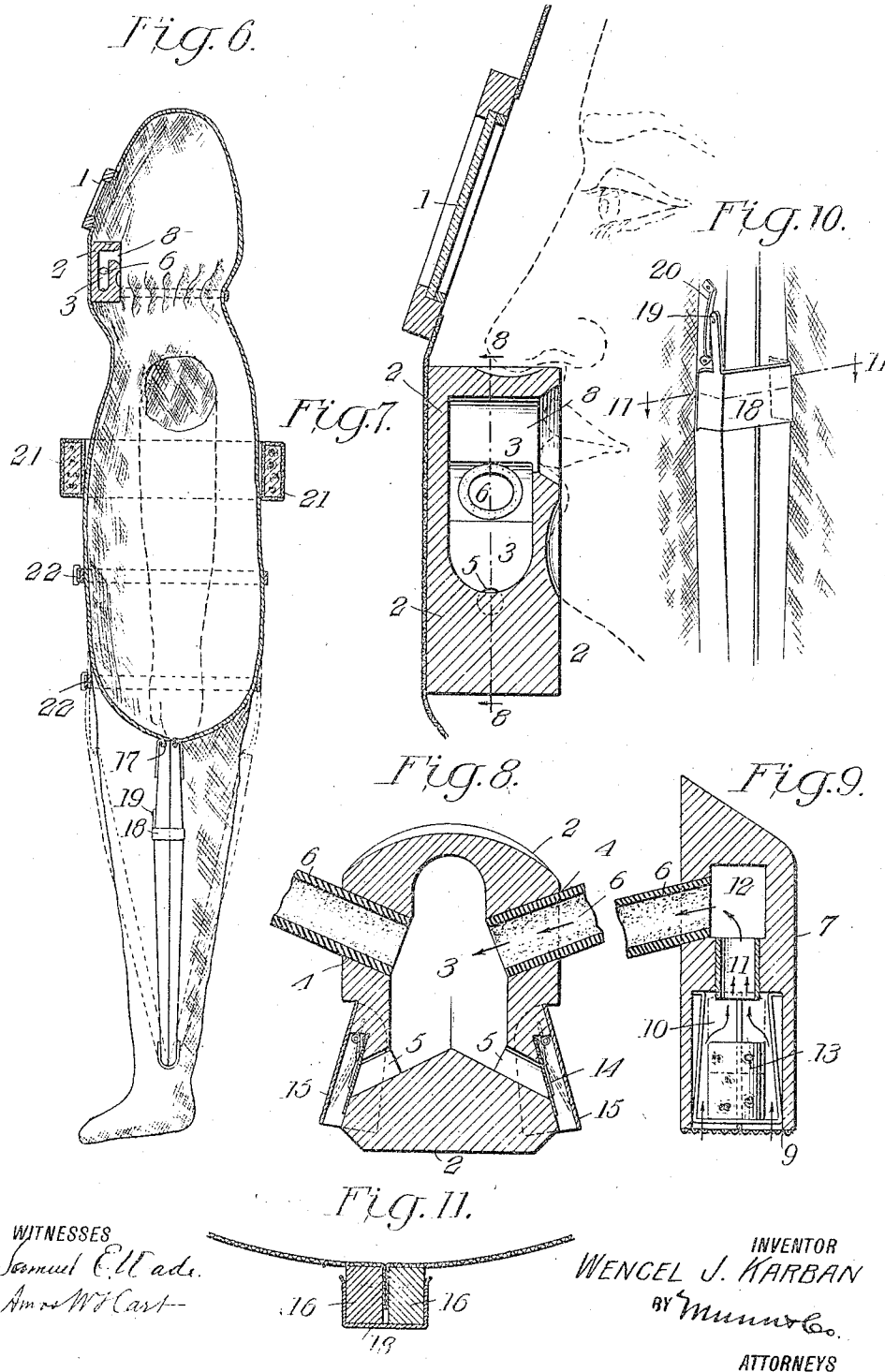
WITNESSES
Samuel E. Uade
Amos W. Clark

INVENTOR
WENCEL J. KARBAN
BY *Munn & Co.*
ATTORNEYS

1,127,632.

Patented Feb. 9, 1915.

2 SHEETS—SHEET 2.



WITNESSES
Samuel E. Adams
Amos W. Carter

INVENTOR
WENCEL J. KARBAN
BY *Munn & Co.*
ATTORNEYS

UNITED STATES PATENT OFFICE.

WENCEL J. KARBAN, OF BRYANT, WISCONSIN.

LIFE-PRESERVING SUIT.

1,127,632.

Specification of Letters Patent.

Patented Feb. 9, 1915.

Application filed March 12, 1914. Serial No. 824,123.

To all whom it may concern:

Be it known that I, WENCEL J. KARBAN, a citizen of the United States, and a resident of Bryant, in the county of Langlade and State of Wisconsin, have made an Improvement in Life-Preserving Suits, of which the following is a specification.

My invention is a suit made of water-proof material and adapted to completely inclose the head and body of a person.

The features of novelty are the construction of the mouth-piece and its side attachments controlling the admission of air to support respiration, and of means for clamping and tightly closing the openings in the legs and crotch of the suit which opening is required to permit the application of the suit to a person.

The details of construction, arrangement, and operation of parts are as hereinafter described, and illustrated in the accompanying drawing, in which—

Figure 1 is a face view of the suit applied to a person; Fig. 2 is a perspective view of the mouth-piece and its side valved attachments controlling admission of air; Fig. 3 is a perspective view of the clamping bars employed for closing the opening in the legs and crotch of the suit after the latter has been donned or applied to a person as in Fig. 1; Fig. 4 is a sectional view illustrating one of the joints between the clamping bars; Fig. 5 is a cross section on the line 5—5 of Fig. 2; Fig. 6 is a vertical section of the suit; Fig. 7 is a vertical section of the mouth-piece and a portion of the head attachment of the suit; Fig. 8 is a vertical section on the line 8—8 of Fig. 7; Fig. 9 is a vertical section on the line 9—9 of Fig. 2; Fig. 10 is a perspective view illustrating the attachment to the clamping bars of a device for holding them in the closed position. Fig. 11 is a cross section on the line 11—11 of Fig. 10.

The entire suit is adapted to completely inclose a person, as will be understood by reference to Figs. 1 and 6. It is made of waterproof canvas, or other suitable thin, light material, and the head is provided with a window or glazed portion 1, as shown in several figures; see particularly Fig. 7.

In practice, it will be understood that a cushion will be inserted at the top of the head portion. The mouth-piece 2 (see Figs. 2, 7 and 8) is a block, preferably constructed of wood, and provided with a central cham-

ber 3 having openings or passages 4 near its upper end, and small passages 5 near its lower end. The upper passages 4 receive the inner ends of rubber tubes 6, which extend to, and communicate with, the side air-boxes 7; see Figs. 2, 5, and 9. The latter are provided with valves for controlling the admission of air, as will be further presently described.

The mouth-piece 2 is inclosed in the head portion of a suit, as shown in Figs. 1 and 6, while the air-boxes 7 are on the outer side of the suit. On the inner side and near the upper end of the mouth-piece 2, is an opening 8 which communicates with the interior chamber 3. When the suit is applied to a person this opening 8 is opposite his mouth, and small cavities are provided on the top and the inner side to receive the nose and chin, as will be understood by reference to Fig. 7. Air is drawn by suction into the chamber 3, and thus passes through the opening 8 and into the mouth of the person wearing the suit. As will be understood by reference to Fig. 9, such air enters the lower end of the air-boxes 7, and passes upward through the chamber 10 and tube 11 to chamber 12, as indicated by arrows. The lower end of the air-boxes is provided with a wire-gauze cover. A cork valve 13 is arranged in the lower chamber 10 of each air-box 7, and is adapted to seat upward against the lower end of the tube 11; thus, if water reaches the valve it will raise the valve so that it seats against the tube 11 and prevents water entering the chamber 12, and thus finding access to the mouth-piece 2. In case, however, water should accidentally find its way into the chamber 3 of the mouth-piece, it will escape downward through the passages 5, which, as shown in Fig. 8, are normally closed by thin plate spring valves 14, the same being protected by a metal housing or covering 15. The same means also provides for escape within the suit of water of condensation which may be derived from respiration.

The inner sides of the legs of the suit and also the crotch are divided or separated so as to form an opening sufficiently large to allow the suit to be applied to a person by passing over his head. It will be understood that in practice the suit will be ample in size to allow this to be conveniently done. It is also advisable that the arms of the

suit should be large and loose enough to permit the occupant to withdraw his hand and arm, if desired. It is of course requisite after the suit has been donned, that the opening referred to shall be closed tightly to prevent admission of water. For this purpose I employ four clamping bars 16, the same being connected, in the way represented in Fig. 3, by means of flexible joints. See also Fig. 4. This joint is preferably formed by means of an elastic medium 17, such as canvas, leather or rubber, and permits the pairs of bars to be separated and applied as required.

As will be understood with reference to Figs. 1, 10 and 11, the edges of the suit along the inner sides of the legs and in the crotch are brought together and clamped between bars 16, and then a spring fastening 18 is applied to hold the bars tightly clamped together. Various fastenings may be employed for this purpose, and I do not desire to limit myself in this particular. As shown in this instance, the fastening 18 is in the nature of a spring clasp adapted to embrace the sides of the two bars when brought together, and the same is pivoted to one of the bars at 19 as shown in Fig. 10, a spring 20 being also applied to assist in holding the fastening closed.

It will be understood that, in practice, the suit will be made of sufficient capacity to contain a considerable volume of air which may serve to support the weight of the person in the water; but as an additional means of safety in this particular, I purpose to employ a cork belt 21 applied under the arms, as shown in Figs. 1 and 6,

and another ordinary belt 22 may be applied around the waist and hips as shown.

What I claim is:—

1. The combination with a suit adapted to inclose a person, of a mouth-piece arranged in the head portion of the same and having a central chamber, a lateral opening for respiration, side passages for admission of air, and valved passages in its lower portion for permitting escape of water that may accumulate in the mouth-piece, as described.

2. A life-preserving suit composed of water-proof material and adapted to inclose the body of a person, the same being divided along the inner sides of the legs and in the crotch to form an opening facilitating the application of the suit to a person; clamping bars adapted to be applied to the divided edges of the garment; and means for clamping them tightly to form a water-tight joint, as described.

3. The combination with a life-preserving suit adapted to inclose the person and having the legs and crotch divided as described; of two pairs of clamping bars, the members of each pair being flexibly hinged together at one end and to the members of the opposing pair at their opposite ends, and spring fastenings adapted for application to the pairs of bars for clamping them tightly upon the edges of the divided portions of the suit, as described.

WENCEL J. KARBAN.

Witnesses:

JOHN BENISHEK,
B. W. RYNDERS.