July 26, 1927. 1,636,766

A. B. DRÄGER

CARRYING DEVICE OR BELT FOR BREATHING APPARATUS, PARTICULARLY SELF RESCUING APPARATUS

Filed June 11, 1926

Fig. 5.

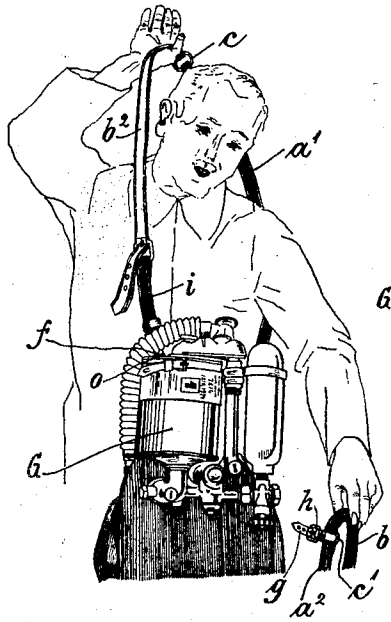


Fig. 4.

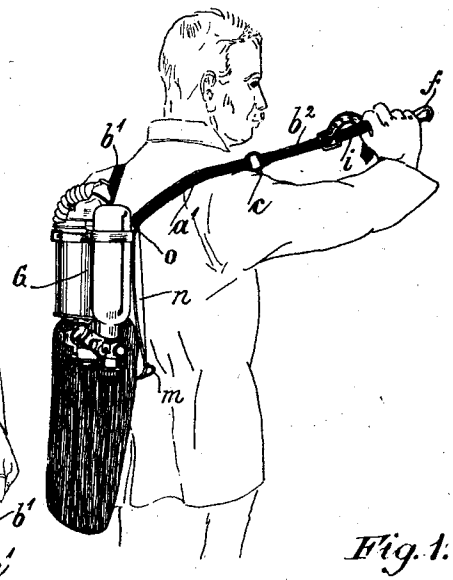


Fig. 1.

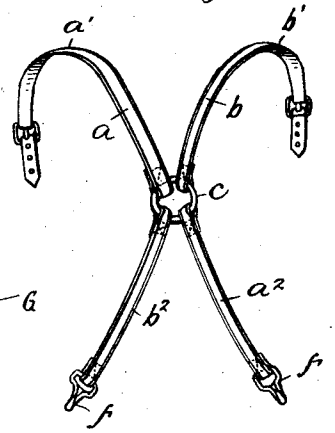


Fig. 3.

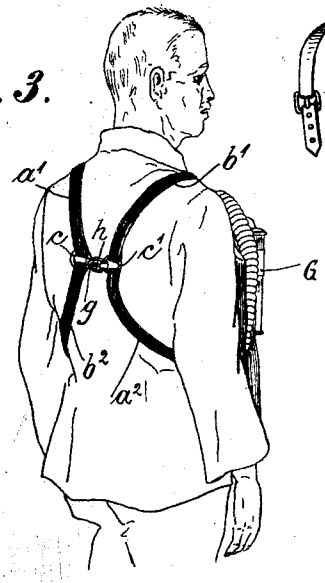
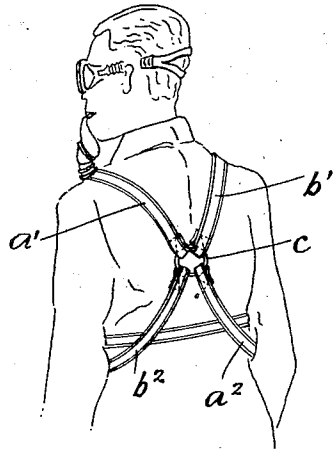


Fig. 2.



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UNITED STATES PATENT OFFICE.

ALEXANDER BERNHARD DRÄGER, OF LUBECK, GERMANY.

CARRYING DEVICE OR BELT FOR BREATHING APPARATUS, PARTICULARLY SELF-RESCUING APPARATUS.

Application filed June 11, 1926, Serial No. 115,170, and in Germany September 24, 1925.

Carrying devices or harnesses for breathing apparatus have to satisfy a number of requirements. Thus by way of example the carrying device must allow of a speedy putting on the apparatus to avoid loss of time in case of danger. The hurried application dare not impare the good fit on the body, which is a very important requirement. Moreover it is a necessity that the carrying device is adjustable to the various shapes of the human bodies, without any considerable loss of time in changing belts or buckles, so that it makes no great difference whether the person has a narrow or broad back or whether he has low or high shoulders. All such requirements are given satisfaction by the novel carrying device, consisting of two belts or straps which similar to braces or suspenders cross one another on the back and can be fastened with their upper ends to the upper corners and with their lower ends to the lower corners of the carrier plate of the breathing apparatus. The straps are severed where they cross one another and the four inner ends of the sectional strap thus formed, are reconnected by at least one ring forming the crossing, to which the inner ends of the straps are pivotally or slidably connected. When a breathing apparatus having a carrying belt thus consisting of four sections is applied or put on, the apparatus will at once snugly fit to the breast or back as the case may be, and the two lower sections hanging on the ring may then be hooked or otherwise fastened to the apparatus or its carrier plate respectively adjusting themselves automatically to the proper angles corresponding to the greater or smaller breadth of the back of the person.

Means may be provided to enable the apparatus to be worn either on the back or on the breast or on one side as may be found convenient or necessary, only a few simple manipulations being required to adjust the implement to the desired position.

In the drawing the device is shown by way of example in two modes of construction and the divers manners of applying it to the body.

Fig. 1 is a perspective view of the device in its simplest form.

Fig. 2 illustrates the manner of applying the device.

Fig. 3 illustrates a modification of the device applied in a similar manner as is shown in Fig. 2, that is to say the apparatus being placed on the breast.

Fig. 4 illustrates the manner of placing the apparatus on the back, and

Fig. 5 on one side.

The device as has been explained above is composed of two straps a, b, crossing one another, which are severed at the crossing point to form four sections a', a^2, b', b^2 reconnected by a looped connecting device illustrated in Figs. 1 and 2 in the form of a ring c. The two upper sections a', b' forming the shoulder straps are provided with suitable buckles d for attachment to the upper corners of the apparatus, and the lower sections a^2, b^2 are provided with hook-like means of attachment for instance a carabine hook f to enable them to be hooked to the lower corners of the apparatus. The connection of the sections with the ring c is of any convenient permanent type and is always such as to give sufficient movability to allow of an automatic adjustment to suit the breadth of the back of the person to whom the apparatus is applied.

In the construction shown in Figs. 3 to 5 the looped connecting device consists of two rings c and c', which are connected with one another by a sectional stay or short strap g, the sections of which are connected with one another for instance by a buckle h.

When the apparatus is applied to the breast or the back, as shown in Figs. 2, 3 and 4, the device is suspended from the shoulders similar to a pair of suspenders or braces. Over the neck belt, which heretofore was used for suspending breathing or rescuing apparatus on the breast the new device has the advantage that the nape or neck is relieved of all pressure and that the wearer of the apparatus has greater freedom of movability.

If the apparatus is to be hung to the back, as shown in Fig. 4, the stay g will be disconnected or removed by opening the buckle h. The sections a', b^2 and a^2, b', respectively, then form two belts, which may be used as shoulder straps to enable the apparatus to be carried like a knapsack. The lower end of the strap b^2 may be lengthened by a special adjustable buckle-strap i, which is provided with a hook, for instance a carabine-hook f, for hooking it to the ring m on the lower corner of the apparatus, or the

carrier plate *n*. If so desired the strap a^2 may be made adjustable in length in a similar way. The straps *a'* and *b'* may be both detachably or firmly fastened to an eye *o* on the upper part of the apparatus, or only one may be detachably and the other firmly fastened to the apparatus.

As may be gathered from Fig. 5 the straps on one side, for instance *b'* and a^2, may be fully detached, and only the other two sectional straps *a'* and b^2 used as a shoulder strap to carry the apparatus on one side, it then hanging on the hip opposite the shoulder on which the strap is hung. The connection of the strap section b^2 with the upper part of the apparatus is in such case secured by the lengthening buckle strap *i*. the carabine-hook *f* of which being adjusted by the buckle to adapt it to be hooked to an eye *o* on the upper part of the carrier plate *n*.

I claim:—

1. A carrying harness for breathing apparatus comprising a looped connecting device, and a plurality of individual straps each having one end permanently connected with said connecting device, the connections between said straps and connecting device being relatively loose whereby said straps are capable of being slidably movable on the looped connecting device, the other ends of said straps being arranged for connection with the apparatus.

2. A carrying harness for breathing apparatus comprising two rings detachably connected with each other, two independent straps each having one end permanently connected with one of said rings, two additional independent straps each having one end permanently connected with the other ring, the connections between said straps and rings being relatively loose to permit said straps to slide on said rings, the other ends of said straps being arranged for connection with the apparatus.

3. A carrying harness for breathing apparatus comprising two rings, a releasable stay for detachably connecting said rings with each other, two independent straps each having one end permanently connected with one of said rings, two additional independent straps each having one end permanently connected with the other ring, the connections between said straps and rings being relatively loose to permit said straps to slide on said rings, the other ends of said straps being arranged for connection with the apparatus.

4. A carrying device according to claim 2 characterized by this that the two rings are connected with one another by a releasable stay.

5. A carrying device according to claim 2 characterized in this that one of the lower ends of the lower strap is adapted to be detachably fastened to the upper corner of the apparatus.

In testimony whereof I have signed my name to this specification.

ALEXANDER BERNHARD DRÄGER.