

Oct. 25, 1927.

1,646,590

J. MILDENBERG

MASSAGE BANDAGE AND THE LIKE

Filed April 27, 1926

2 Sheets-Sheet 1

Fig. 1.

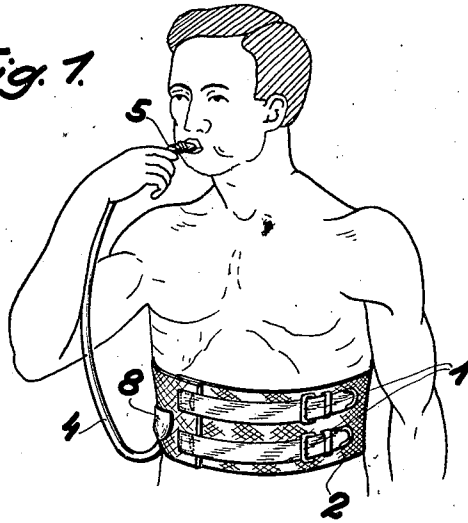


Fig. 2.

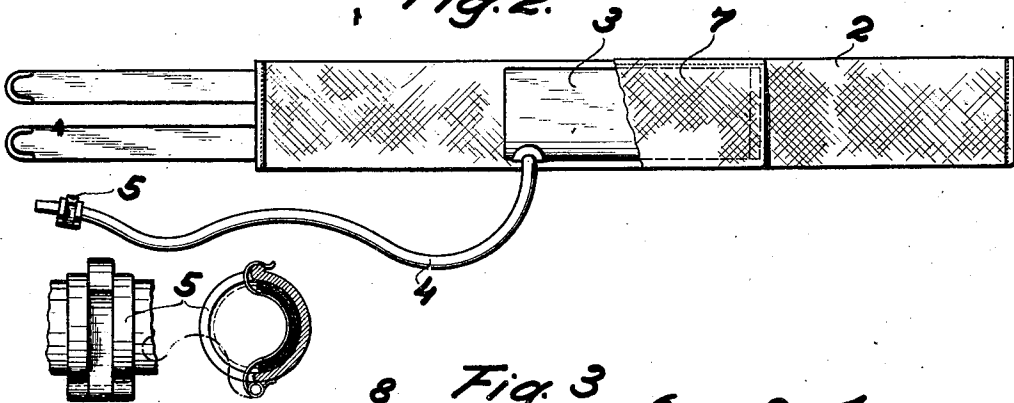
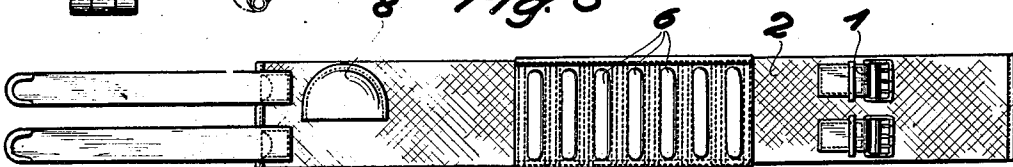


Fig. 3.



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Fig. 4.

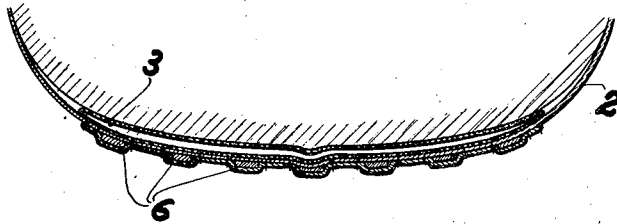


Fig. 5.

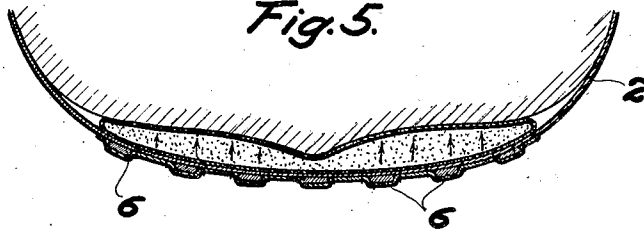


Fig. 6.

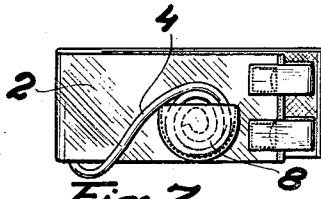


Fig. 7.

Fig. 8.

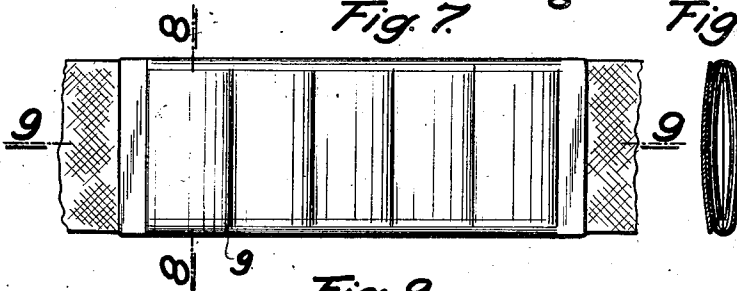
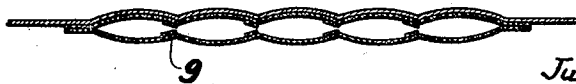


Fig. 9.



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## UNITED STATES PATENT OFFICE.

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## MASSAGE BANDAGE AND THE LIKE.

Application filed April 27, 1926, Serial No. 104,897, and in Germany February 12, 1925.

This invention has reference to improvements in pneumatic massage-apparatus and it is intended to provide means of producing a continuous and uniform massage treatment of the part of the body to which the device is applied and without the inconveniences arising from unequal pressure distribution and from the pinching and squeezing of the fastening means frequently occurring in the devices of the kind as suggested in the prior art. Broadly considered the invention comprises an inflatable pad or bag to be directly applied to the body and provided with spacedly disposed substantially stiff backing blocks or the like and with flexible fastening straps, belt or the like extending in the longitudinal direction of the pad, bag or the like, so that the tensional pressure is all evenly distributed throughout the device and there is no liability of crowding or pinching the flesh of the wearer, as would be the case with flexible fastening devices secured between sectional portions of the massage pad or marginally with relation thereto. The device according to this invention, while applicable to all parts of the body is among other uses particularly adapted for the treatment of the back of the human body. The device is inflated by the wearer himself by means of a flexible conduit or the like the air-pressure being easily regulated in conformity with the particular requirements of the case. In consequence of the expansion and contraction of the body incident to the action of breathing and as a result of every movement of the wearer and of the back-pressure produced by the comparatively stiff sectional backing of the device a massage treatment of the body is readily obtained without necessitating any outside or foreign power. In addition thereto the device when inflated produces very desirable warming of the part of the body submitted to the massage treatment and in view thereof it may be employed as a substantially non-slipping warming cushion irrespective of any massage action, provided the pad, bag or belt constituting the device is more loosely applied. By deflating the device the massage treatment may be interrupted and the belt or bag will then lie so close to the body that its presence will not show and cannot be detected from the outside. In view thereof it is a further object of this invention to provide means of giving a better hold to the body and particularly to the waist of the

wearer. This is of importance for instance in the case of weakness of the chest and of various interior troubles such as pleuritis or the like.

The invention will be more particularly described with reference to the accompanying drawing showing by way of example a preferred embodiment of the principles of the invention in Figure 1 in operation as applied to the body and in the act of being inflated. Figures 2 and 3 are respectively front and rear elevations of the device. Figures 4 and 5 are longitudinal sections showing the device in the deflated and respectively in the inflated condition. Figure 6 is a detail to be referred to. In Figures 7, 8, and 9 another modified construction is shown in Figure 7 in front view, and in Figure 8 in longitudinal section, and in Figure 9 in transverse section through the front wall thereof.

The belt-shaped body 2 of the device may be provided with the buckles 1 and carries on its inside an air bag, pad or the like 3 adapted to be inflated by means of the flexible tube 4. A clamp 5 of any suitable construction serves to close the tubing and to regulate the air pressure and to retain the air in the bag or cushion 3. In order to prevent bulging of the inflated bag it is provided on its outside with spaced transverse stiffening members, such as rods 6, slats, blocks or the like.

In place of the slats or transverse rods which serve as stiffening means a suitable number of adjacently or spacedly disposed series of preferably porous reinforcing enlargements or projections 9 may be provided as shown in Figures 7 and 9 of the drawing.

In addition to these stiffening and reinforcing means a piece of cloth or any suitable fabric 7 may be attached to one edge of the belt 2 which, when the device is in use, may be folded over the pad or the like so as to protect the same from perspiration.

The belt according to this invention is tightly buckled around the waist so as to locate the pad or cushion upon the spine of the wearer (Fig. 4), and transversely thereto. It is then inflated (Fig. 1) so that it will snugly and securely conform to the body of the wearer (Fig. 5). The end of the flexible tubing 4 may be inserted in a small pocket 8 on the belt (Fig. 6), which is shaped to receive it in a flatly coiled condition.

Among the various other uses besides the mere massage treatment I may mention for instance the application of the device in the case of fractures of the ribs, pleuritis and  
 5 other complaints of the human system. In such cases it may be applied in a higher position on the body, for instance around the chest so as to provide an excellent elastic hold and support therefor.

10 I have herein shown the device in what I consider to be the most favorable realization of the principles thereof, but it should be understood that it is susceptible of such modifications and changes which will sug-  
 15 gest themselves to the expert to more advantageously adapt it to the particular use and without thereby deviating from the spirit of the invention as pointed out in the appended claims. A pocket 8 is provided on  
 20 the belt outside for receiving the coiled end of the tube 4 when not in use.

I claim:

1. A massaging device comprising a band adapted to be applied to embrace a portion  
 25 of the body, a pneumatic bag of substantially oblong rectangular form secured upon the

inner surface of the band and presenting a broad inner wall adapted to lie in contact with the body and an outer wall lying in contact with the band, means for inflating  
 30 said bag, and stiffening members on the outer side of the band arranged transversely thereof in spaced relation opposite the outer wall of the bag.

2. A massaging device comprising a band  
 35 adapted to be applied to embrace a portion of the body, a pneumatic bag of substantially oblong rectangular form secured upon the inner surface of the band and presenting  
 40 a broad inner wall adapted to lie in contact with the body and an outer wall lying in contact with the band, means for inflating said bag, a cover flap carried by the band and movable to cover or uncover the inner  
 45 wall of the bag, and stiffening members on the outer side of the band arranged transversely thereof in spaced relation opposite the outer wall of the bag.

In testimony whereof I affix my signature.

JULIUS MILDENBERG.