(No Model.)

G. F. ELLS.

WATER BANDAGE.

No. 500,568. Patented July 4, 1893.

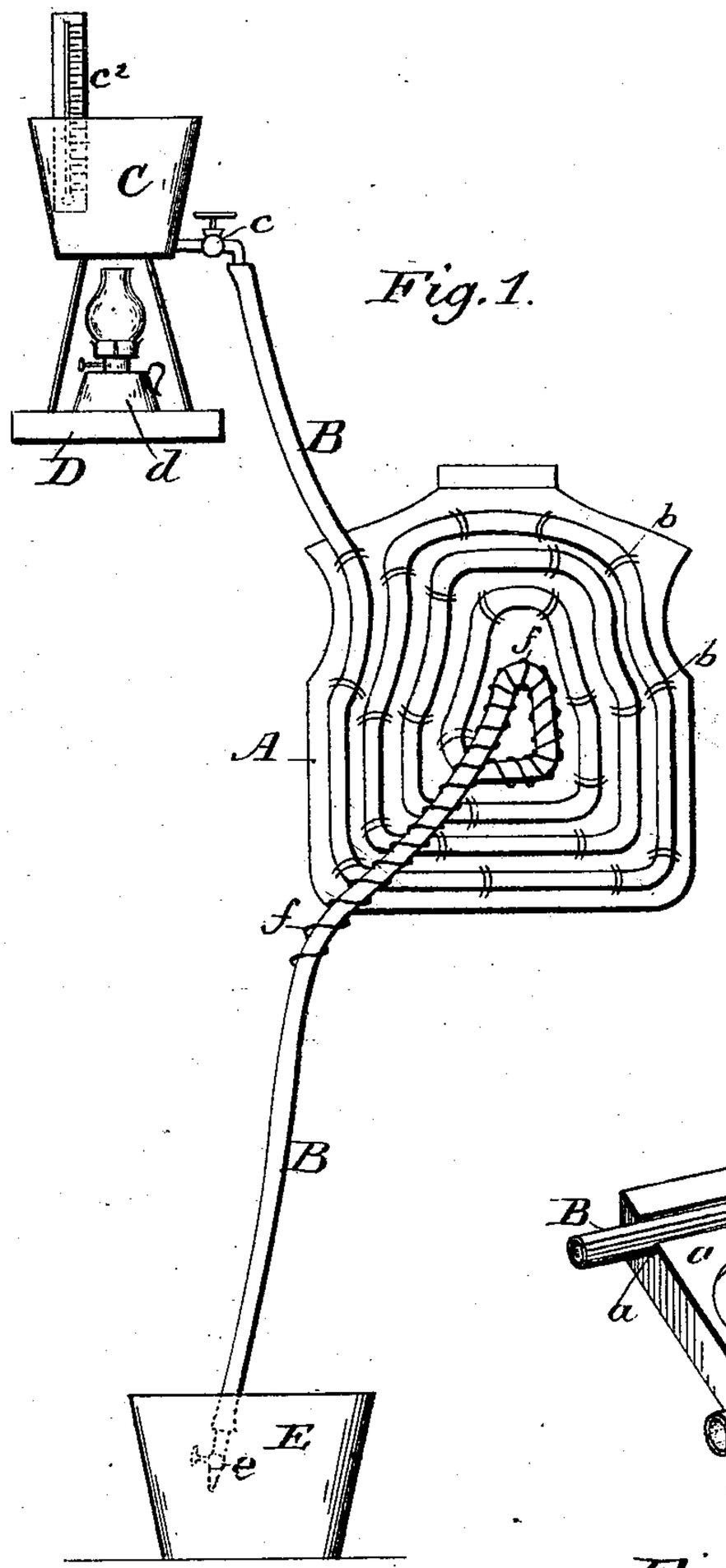


Fig. 1.

Fig. 2.

Fig. 3.

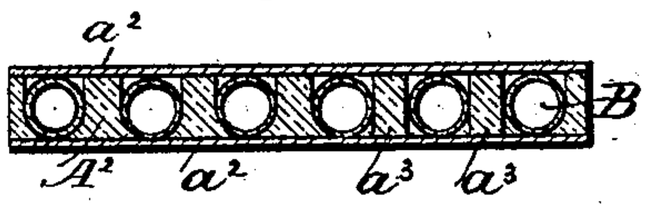


Fig. 4.

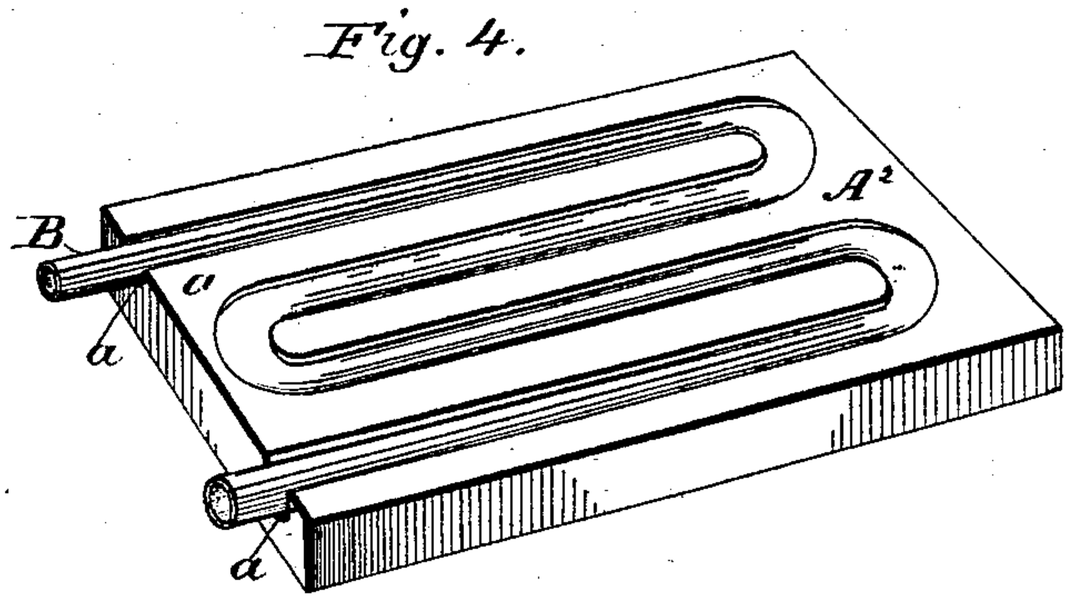
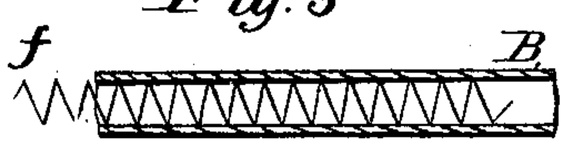


Fig. 5



Witnesses:
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UNITED STATES PATENT OFFICE.

GEORGE F. ELLS, OF BINGHAMTON, NEW YORK.

WATER BANDAGE.

SPECIFICATION forming part of Letters Patent No. 500,568, dated July 4, 1893.

Application filed November 8, 1892. Serial No. 451,403. (No model.)

To all whom it may concern:

Be it known that I, GEORGE F. ELLS, a citizen of the United States, residing at Binghamton, in the county of Broome, State of New York, have invented certain new and useful Improvements in Water Bandages, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to bandages for cooling or for heating any part of a person's body, in a clean, uniform and reliable manner by means of water made to circulate through suitably coiled rubber tubes; and the objects of my improvement are to so protect, inclose, or to support the flexible tubes by the material of the bandage that they cannot be sufficiently compressed and flattened by the weight of a person resting on said bandage, to prevent the flow of water therethrough. I attain these objects by the construction illustrated in the accompanying drawings, in which—

Figure 1 is a front view of a water-bandage constructed in accordance with my invention; the upper end of the tube of said bandage being connected with a reservoir provided with means to heat the contents, and the lower end leading into a water receiving pail. Fig. 2 is a cross section of the bandage on a larger scale. Fig. 3 is a cross section of a modification of said bandage. Fig. 4 is a perspective view of a portion of a bandage showing the water tube embedded therein. Fig. 5 is a longitudinal section of a flexible tube adapted for use with the bandage.

In said drawings, A represents a jacket, to which is suitably attached a flexible india rubber tube B, for example, by means of looped stitches of thread or silk passed over the tube and through the material of the jacket. The upper end of the tube is attached to the faucet *c* of a reservoir C mounted upon a suitable stand or bracket D placed at a higher level than the jacket. Under the reservoir, there is a lamp *d*, that can be lighted to maintain the water in the reservoir C at a uniform temperature, said temperature being easily ascertained by means of a thermometer c^2 placed in said reservoir. The lower end of the tube B, is conducted in a bucket E, adapted to receive the water that is made to circulate slowly through said tube, the lower end of the latter being also provided with a faucet *e*.

Although the bandage in Fig. 1 is in the form of a jacket, it may be of any desired form to cover any part of the body of a person, and so far as now described, the bandage or apparatus is not broadly new. But my improvement consists in peculiar means to insure the proper working of said apparatus and prevent the compression and closing of the tube by the weight of a person, if placed thereon. To prevent said compression, the jacket or bandage consists of a sheet of felt A^2 having a series of grooves or gutters *a* arranged in a spiral or a serpentine order, and of sufficient depth to nearly embed or wholly embed the tube B. The latter is furthermore retained in position within the grooves by the stitches *b* as above stated. To strengthen the sheet of felt, or permit a thinner sheet to be used, a sheet of cotton cloth or of flannel a^2, is sewed or cemented to either the bottom only of the felt as shown in Fig. 2, or to the top and bottom of the felt as shown in Fig. 3. Substantially the same results can be obtained, by first securing the coils of the tube B to the backing of the textile material a^2 at suitable distances apart, and filling the interstices between said coils with strips of felt as shown at a^3 at Fig. 3, said strips being also sewed or cemented to the backing or inclosing sheets of flannel.

To prevent the tube B from collapsing or becoming flattened where it is made to take short bends, or where it is made to pass over the previously packed coils, said portions of the tube are either incased in a spiral of brass or aluminium wire *f* as shown in Fig. 1, or said wire spiral is placed in the tube B, as shown at f^2 in Fig. 5.

Having now fully described my invention, I claim—

1. In a water bandage the combination of a suitably coiled rubber tube, a backing of textile material, and felt secured to the backing between the coils of the tube substantially as described.

2. In a water bandage, the combination of a coiled rubber tube a textile backing for said tube, felt retained between the coils of the tube, and a spiral wire connected with said tube substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE F. ELLS.

Witnesses:
C. W. LOOMIS,
B. N. LOOMIS.