

(No Model.)

C. CLUTHE.
TRUSS PAD.

No. 460,950.

Patented Oct. 13, 1891.

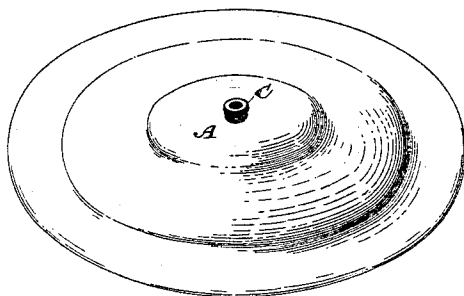


Fig. 1.

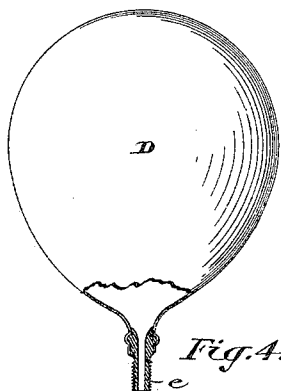


Fig. 4.

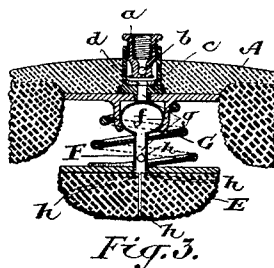


Fig. 5.

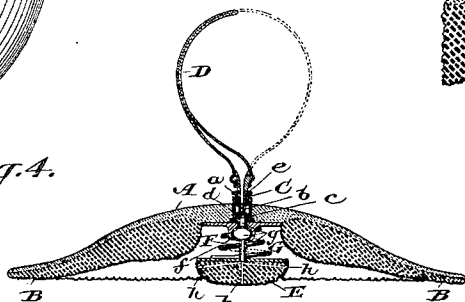


Fig. 2.

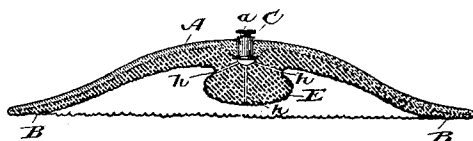


Fig. 3.

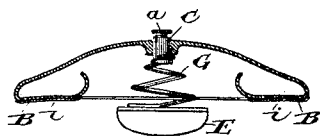


Fig. 6.

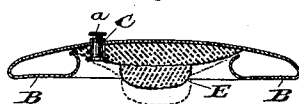


Fig. 7.

Witnesses.
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UNITED STATES PATENT OFFICE.

CHARLES CLUTHE, OF TORONTO, CANADA.

TRUSS-PAD.

SPECIFICATION forming part of Letters Patent No. 460,950, dated October 13, 1891.

Application filed January 22, 1891. Serial No. 378,656. (No model.) Patented in Canada January 22, 1891, No. 55,770.

To all whom it may concern:

Be it known that I, CHARLES CLUTHE, manufacturer, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Hernia-Pads, of which the following is a specification.

Application has been made for this invention in the Dominion of Canada under date of January 22, 1891, Serial No. 55,770.

The object of the invention is to design a device applicable for hernia, which may be held permanently in position, so as to retain the hernia any desired length of time without the aid of a belt, spring, or other similar adjunct; and it consists, essentially, of a shallow cup of suitable material and interior form, which is placed in position over the hernia, and is provided with an air-valve through which, when open, the air is exhausted from between the cup and the skin, but which is immediately afterwards closed, so as to give a permanent suctorial property to the cup and thus retain it in position, as herein-after more particularly explained.

Figure 1 is a perspective view of the outside of the cup. Fig. 2 is a section of the cup with exhaust-bulb inserted in valve to withdraw the air. Fig. 3 is an enlarged sectional detail showing my preferred form of valve. Fig. 4 is a view of exhaust-bulb. Figs. 5, 6, and 7 are sections exhibiting alternative forms of cups.

In the drawings like letters indicate corresponding parts in each figure.

In all devices with which I am familiar it is found necessary to employ a belt, spring, or other adjunct to hold the device or pad in position against the hernia. This fact makes the wearing of the hernia device or pad generally uncomfortable. It is also very inconvenient not only to get on and off, but in other respects well known to the wearer.

As it is very desirable in cases of hernia to wear the pad continuously, it is with the object of producing a device which will in no manner interfere with the motions of the limbs and body and yet always remain firmly in position that my invention is chiefly designed.

A is a shallow cup, which may be made of soft or hard rubber, celluloid, metal, or other

suitable material or combinations of materials, or in any suitable form, as long as the outer surface of the cup is impervious to air.

B is a lip formed around the inner edge of the cup, as shown.

C is an air-valve, which is composed of the hollow screwed plug *a*, with hole *b*, washer *c*, with hole *d*, so that when the screwed plug *a* is raised from its seat on the washer *c* a free passage-way is provided into the interior of the cup.

D is a rubber exhaust-bulb provided with a threaded nozzle *e*, designed to be screwed into the female thread in the plug *a*.

When it is desired to place my device in position, I place the cup over the hernia and press it until the lip B comes in perfect contact with the skin all around. I then open the valve C by unscrewing the plug *a*, so that there is a clear passage-way into the interior of the cup. The nozzle *e* of the exhaust-bulb D, which is previously compressed, is next inserted, and as the bulb D expands it withdraws the air from between the interior of the cup and the skin, thereby creating sufficient suction so as to cause the lip B to adhere firmly to the skin and the central portion or pad E of the cup to press firmly against the hernia. The plug *a* is now turned sufficiently so as to bring its lower end against the washer *c* so as to close the hole *d*, and thus prevent any air entering the cup. The exhaust-bulb D may now be removed, and the cup will remain securely in position.

In Fig. 2 I show a form in which the inside is made of porous sponge rubber, and the outside of close non-porous rubber. The center portion or pad E is connected by a hollow spindle F, and hollow ball *f* and socket, to the outer portion. A spring G is also provided to hold the pad in position. Holes are made in the ball *f* so as to provide a clear passage-way *g* from the interior of the cup to the air-valve C. Holes *h* might be made through the central portion or pad E, as indicated; but I think if the central portion be made of sponge rubber, as in Figs. 2 and 5, they might be dispensed with.

In Fig. 5 I show a form with a central portion E, forming part of the interior of the cup.

In Fig. 6 I show another form made of hard rubber or metal, with the central portion or

pad E connected to the main portion by the spring G. In this figure I show a ring of adhesive plaster, which might also be adapted to securely bring the lip B against the skin, so as to further insure the outer edge being air-tight.

In Fig. 7 I show still another form, which is formed of a combination of hard rubber or metal and sponge rubber. The air-valve C in this instance is placed away from the center. When the cup is placed in position and the air withdrawn, the central portion E being of sponge rubber and elastic, is forced down into the position shown by dotted lines in this figure, and thus holds the hernia securely in the most extreme cases.

The various forms shown are adapted for different extremes of hernia; but it will of course be understood that various other forms might emanate from these without departing from the spirit of my invention. The exhaust-bulb D, nozzle e, and air-valve might also be altered in construction, or an air-pump might be substituted for the bulb D, and yet accomplish the same end.

From this description it will be seen that the central portion or pad E may be placed in the exact spot after properly reducing the hernia, and securely and permanently held there in the manner hereinbefore set forth without the aid of any spring, belt, or other adjunct, and so perfectly that the aperture will be completely closed up within the shortest possible time. It will also be seen that I

might dispense with the valve C if the cup is formed of an elastic material, as by flattening the cup, and then by placing it over the hernia enough air would be expelled to give sufficient suction to hold the cup in position for a considerable time.

What I claim as my invention is—

1. An improved device for retaining hernia, consisting of a shallow cup with a valved opening from the interior of the cup, whereby the air may be withdrawn from the interior, substantially as described.

2. A shallow cup A, having a lip B formed around the inner edge, and a central portion or pad E, in combination with an air-valve C, arranged substantially as and for the purpose specified.

3. A shallow cup A, having a lip B formed around the inner edge, and a pad E, having a spring G connecting it to the interior of the cup, in combination with an air-valve C, communicating with the interior of the cup, substantially as specified.

4. A shallow cup A, having a lip B formed around the inner edge, and a pad E, having a spring G, hollow spindle F, and hollow ball f, with holes arranged with a socket to connect the pad E to the cup and form a clear passage-way to the air-valve C, substantially as specified.

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Witnesses:

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