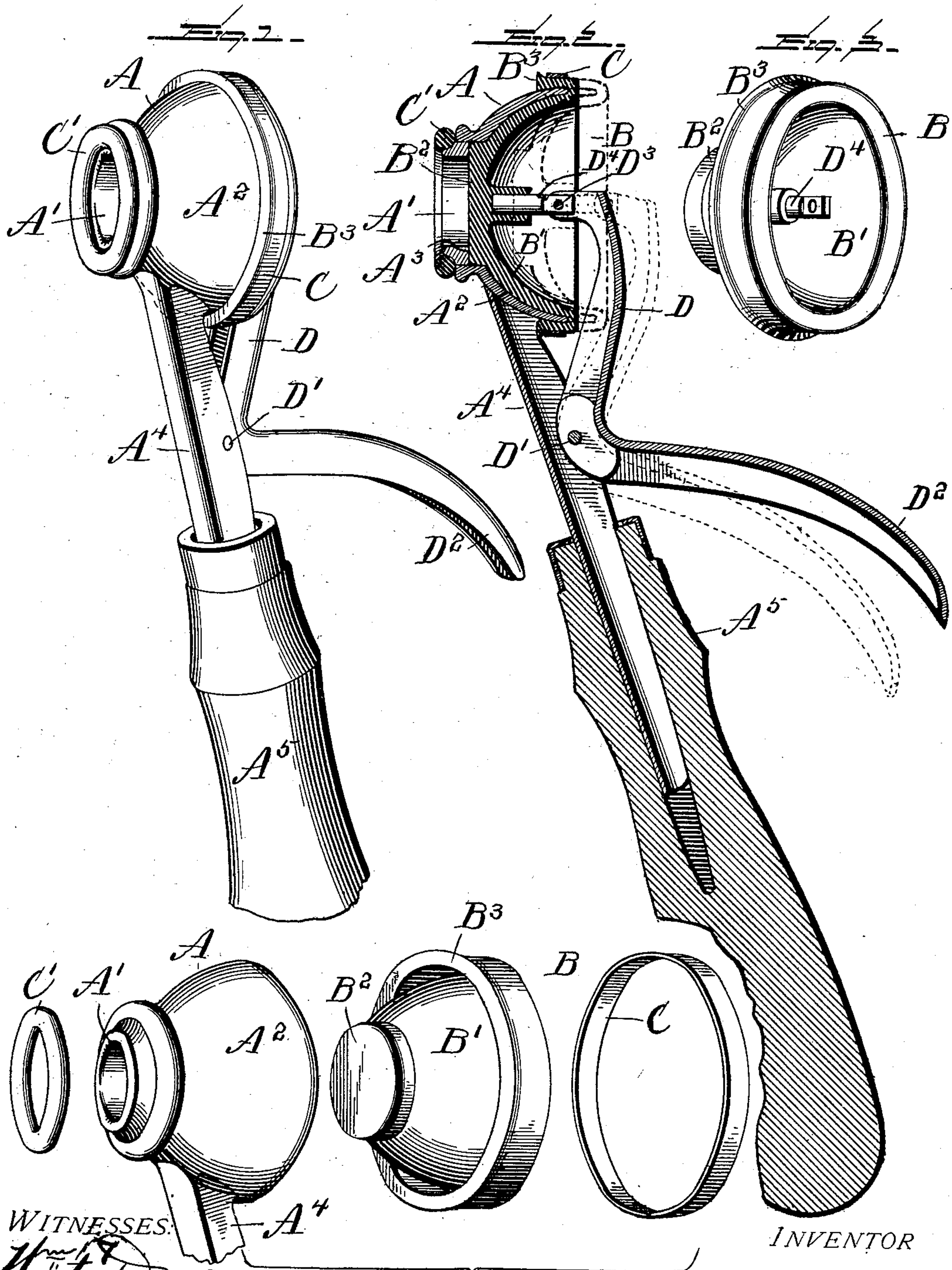


No. 696,345.

Patented Mar. 25, 1902.

H. E. LAW.
MASSAGING INSTRUMENT.
(Application filed Dec. 24, 1901.)

(No Model.)



WITNESSES:

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MASSAGING INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 696,345, dated March 25, 1902.

Application filed December 24, 1901. Serial No. 87,063. (No model.)

To all whom it may concern:

Be it known that I, HERBERT EDWARD LAW, a citizen of the United States, residing at San Francisco, in the county of San Francisco, State of California, have invented certain new and useful Improvements in Massaging Instruments, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to a massaging instrument, and particularly for a device by which the tissues of the skin are lifted by a vacuum or air-pressure and fresh blood thereby drawn or brought into the same, so that a renewal of the tissues occurs, causing a development of the same and of the muscles.

The invention has for its object to provide a vacuum-chamber having a movable diaphragm therein actuated by a lever carried by the handle of the instrument, whereby the movement of the diaphragm from the open end of the chamber, which is placed in contact with the skin, produces a vacuum of varying extent within the chamber.

A further object of the invention is to provide a cup or bowl shaped vacuum-chamber in combination with a concaved rubber diaphragm adapted to fit the inner surface of the cup, so as to expel all air therefrom when in contact with said surface and to immediately produce a vacuum when withdrawn from contact with the surface, which withdrawing action causes the elastic diaphragm to act mechanically as a spring for restoring itself into contact with the cup.

Other and further objects and advantages of the invention will be hereinafter set forth, and the novel features of the same specifically defined by the appended claims.

In the drawings, Figure 1 is a perspective of the instrument; Fig. 2, a longitudinal section therethrough; Fig. 3, a detail perspective of the outer face of the rubber diaphragm, and Fig. 4 a similar view of the parts of the vacuum device separated from each other.

Like letters of reference refer to like parts throughout the several figures of the drawings.

The letter A designates a vacuum-chamber, which may be of any suitable configuration or material and is provided with a movable diaphragm B, secured thereto opposite

an opening A', adapted to be placed in contact with the skin to be operated upon. As showing a desirable form of this chamber, a cup or bowl A², having a concaved inner surface, is illustrated in the present application. At the lower end of this cup a shoulder A³ is formed, and the cup may be supported from a handle in any preferred manner—for instance, by a shank A⁴, extending into a handle A⁵, of any desired form.

The diaphragm B may be formed of any desired configuration or material; but for the purpose of coöperating with the cup A² just described the diaphragm is formed of elastic material, such as rubber, and provided with a concaved portion B', adapted to snugly fit and contact with the walls of the cup and terminates at its inner end in a circular disk B², adapted to seat in contact with the shoulder A³ and form a perfectly air-tight contact with the inner face of the cup. This diaphragm is shown as held in position by means of an overturned flange B³, engaging the outer end of the cup and held in contact by means of an annular ring C fitted thereon. For the purpose of withdrawing the diaphragm from contact with the cup a lever D is pivotally mounted, as at D', upon the shank A⁴ and provided with an operating-handle D². The lever D is pivoted at D³ to a projection or pin D⁴, extending centrally from the diaphragm, so that when the handle D² is pressed toward the handle A⁵ of the cup the diaphragm is gradually withdrawn from contact with the walls of the cup, thus immediately producing a vacuum therein when the opening A' is in contact with the skin or part to be operated upon, such position being shown by dotted lines in Fig. 2. When in this position, the elastic material of the diaphragm forms a spring to mechanically restore the diaphragm into contact with the inner wall of the cup. If found desirable, an elastic ring C' may be applied around the edge of the opening A' to the cup, so as to secure close contact with the flesh or skin to which the instrument is applied.

In the application of the invention the open end A' of the cup is applied to the skin or surface to be treated, and by pressing slightly upon the handle of the lever D a vacuum is produced within the chamber by the with-

drawal of the diaphragm from contact with the walls thereof, the effect of which is to draw the covered tissues or part to which the application is made into the opening A'. The movement or suction exerted by the instrument is regulated by the pressure upon the lever, and in some instances a very slight pressure upon the lever is desirable while moving or sliding the instrument over the skin. By this action the tissues are lifted out of their old set grooves and fresh blood drawn or brought to the parts, which accomplishes a renewal and development of the tissues and muscles for the purpose of removing wrinkles from the face or treating other portions of the body. When the diaphragm is in the position shown by dotted lines in Fig. 2, it produces a mechanical spring action for the purpose of automatically restoring itself into contact with the walls of the cup.

It will be obvious that changes may be made in the details of construction and configuration of the instrument without departing from the spirit of the invention as defined by the appended claims.

Having described my invention and set forth its merits, what I claim, and desire to secure by Letters Patent, is—

1. In a massaging instrument, a vacuum-chamber having an opening at one end, a movable diaphragm disposed opposite said opening at the end of said chamber and adapted to contact with the walls thereof, and means for moving said diaphragm to create a vacuum; substantially as specified.

2. In a massaging instrument, a vacuum-chamber having an opening at one end, a movable diaphragm disposed opposite said opening at the end of said chamber and adapted to contact with the walls thereof, and a lever pivotally mounted upon a handle extension from said chamber and pivotally connected to said diaphragm; substantially as specified.

3. In a massaging instrument, a vacuum-chamber, an elastic diaphragm contacting with the interior walls of said chamber to produce an immediate suction when withdrawn therefrom and acting mechanically as a spring to restore itself, and means for withdrawing said diaphragm from a central point thereof; substantially as specified.

4. In a massaging instrument, a concaved cup, a concaved rubber diaphragm adapted to contact with the interior walls of said cup, and means connected at a central point for withdrawing said diaphragm therefrom; substantially as specified.

5. In a massaging instrument, a concaved cup, a concaved rubber diaphragm adapted to fit the interior of said cup, a central projection from said diaphragm, and an operating-lever pivotally mounted upon a fixed part and

pivotally connected with said projection; substantially as specified.

6. In a massaging instrument, a concaved cup, a concaved rubber diaphragm adapted to fit the interior of said cup, a central projection from said diaphragm, an operating-lever pivotally mounted upon a fixed part and pivotally connected with said projection, an overturned flange from said diaphragm adapted to embrace the edge of said cup, and a ring fitted over said flange; substantially as specified.

7. In a massaging instrument, a concaved cup, a concaved rubber diaphragm adapted to fit the interior of said cup, a central projection from said diaphragm, an operating-lever pivotally mounted upon a fixed part and pivotally connected with said projection, an overturned flange from said diaphragm adapted to embrace the edge of said cup, a ring fitted over said flange, and an elastic ring at the opposite open end of said cup; substantially as specified.

8. In a massaging instrument, a cup having a concaved inner surface and an annular seat at the inner portion thereof, a supporting-shank from said cup, a rubber diaphragm form to fit said cup and provided at its inner end with a disk portion to fit said seat and at its outer end with an overturned flange, a ring over said flange in contact with the outer end of said cup, and means for withdrawing said diaphragm from said cup; substantially as specified.

9. In a massaging instrument, a cup having a concaved inner surface and an annular seat at the inner portion thereof, a supporting-shank from said cup, a rubber diaphragm formed to fit said cup and provided at its inner end with a disk portion to fit said seat and at its outer end with an overturned flange, a ring over said flange in contact with the outer end of said cup, means for withdrawing said diaphragm from said cup, a projection centrally secured to said diaphragm, a lever pivoted to said shank and pivotally connected to said projection, and an operating-handle for said lever opposite the handle from said shank; substantially as specified.

10. In a massaging device, a diaphragm adapted for use with a vacuum-chamber and comprising a concaved portion having at its base a circular thickened disk and at its free edge an overturned flange; substantially as specified.

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

HERBERT EDWARD LAW.

Witnesses:

B. BEACH,

Mrs. H. DIXON.