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A. A. C. HILDEBRANDT & N. W. JOHNSTON.
INSTRUMENT FOR REMOVING BLACKHEADS.

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NO MODEL.

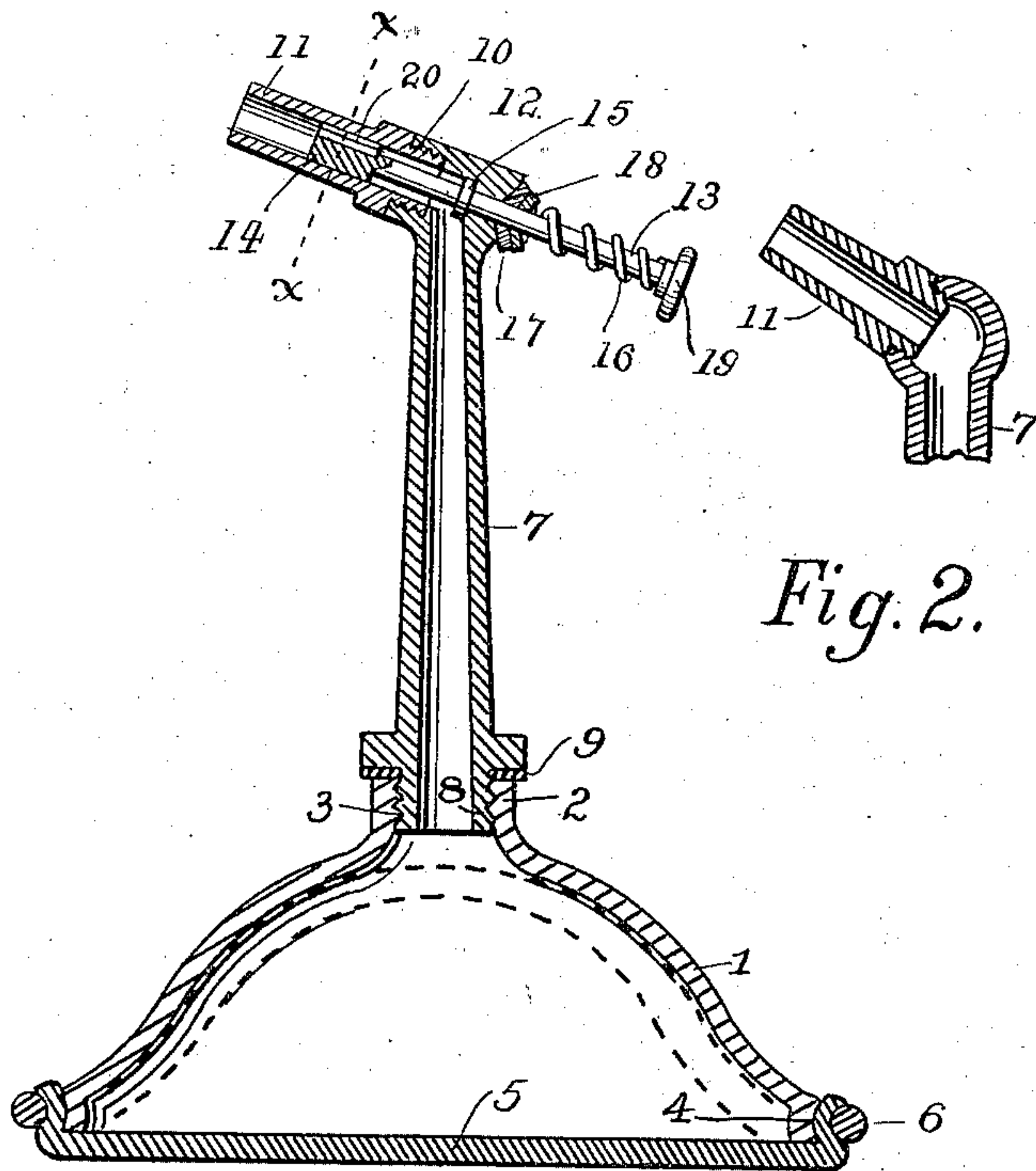


Fig. 2.

Fig. 1.

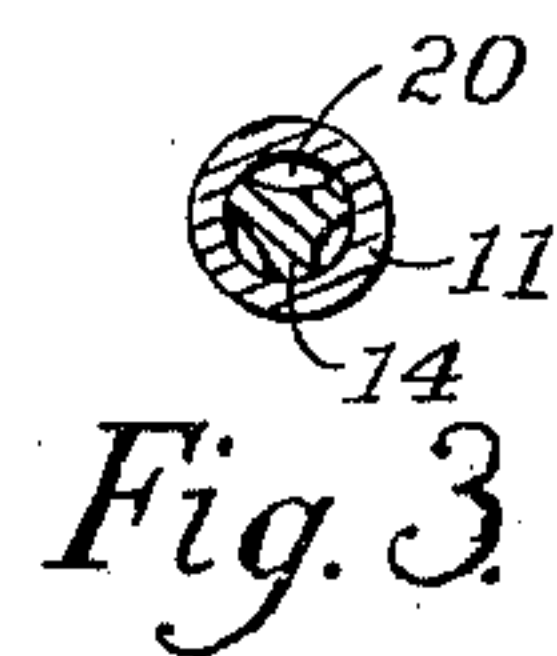


Fig. 3.

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INSTRUMENT FOR REMOVING BLACKHEADS.

SPECIFICATION forming part of Letters Patent No. 722,019, dated March 3, 1903.

Application filed January 31, 1902. Serial No. 91,960. (No model.)

To all whom it may concern:

Be it known that we, ALBERT A. C. HILDEBRANDT, a subject of the King of Denmark, and NORTON W. JOHNSTON, a citizen of the United States, both residing at Chappaqua, county of Westchester, and State of New York, have invented a new and useful Improvement in Instruments for Removing Blackheads, &c., of which the following is a specification.

Our invention relates to an instrument for removing so-called "blackheads" from the skin, the object being, first, to provide a device of this character which will draw out the said worms by means of a vacuum, this procedure, as is well known, requiring less pressure than when a watch-key or other device is used to force out the worm by excessive pressure applied to the skin immediately surrounding the worm; and, second, to produce a simple vacuum device which will remove the worms in a simple and sanitary manner.

The accompanying drawings show an instrument for carrying our process into effect, Figure 1 being a central sectional view of a complete instrument. Fig. 2 is a central sectional view of a modified tube, the nipple being detachable. Fig. 3 is a cross-sectional view on line X X of Fig. 1.

Similar reference-numbers refer to similar parts in the several views.

In appearance our extracting instrument resembles the conventional oil-can, except that we substitute a rubber diaphragm for the bottom.

1 is a bell-shaped body, provided with a neck 2, having an internal thread 3. Near the lower edge is an annular groove 4 to afford a means for holding the rubber disk or diaphragm 5 in place.

6 is a wire which encircles the periphery of the rubber diaphragm when turned up over the edge, as shown, thus insuring an air-tight joint at the bottom. When the rubber is pressed up into the bell-shaped shell, as shown by dotted lines in Fig. 1, and released, the vacuum is produced.

We have shown in the simplest form a vacuum-chamber, though it is obvious that cer-

tain modifications can be made in its construction.

7 is a tapered tube provided with a male thread 8 at its lower end, which corresponds with the female thread 3 in the neck of the body.

9 is a washer to make an air-tight joint.

The upper opening 10 of the tube is of a size just large enough to surround the blackhead—say about one-eighth of an inch in diameter, inside measurement. To vary this size, the tube can be tapped with an inner thread, as shown in Fig. 1, or it may have an enlarged upper end, Fig. 2, and a detachable nipple 11 screwed into it, the opening of such nipple being larger or smaller, as may be required.

The tube 7 may be made of brass or any preferred metal, and nipples 11 may be of silver, aluminium, hard rubber, or of any other suitable or preferred material.

The tube 7 is surmounted by a cylindrical body 12, set at an angle.

11 is a detachable nipple.

13 is a plunger-rod provided with a plunger 14 and a shoulder 15, which limits the outward movement of the rod.

16 is a loosely-coiled spiral spring.

17 is a beveled rubber washer to insure an air-tight joint around the plunger-rod, and 18 is a metal washer.

19 is a presser or thumb-knob.

The plunger 14 has one or more grooves 20 to permit the air to pass by it.

Such being the construction of our instrument, the operation is as follows: To remove a blackhead, depress the diaphragm by the thumb or otherwise to expel all the air from the body, place the mouth of the tube or nipple 11 over the worm and gently press against the skin so as to insure an air-tight joint at that point, release the thumb, and the rubber in resuming its normal position will create a vacuum, thereby extracting the worm. When the worm is extracted, it remains in the nipple 11 in front of the plunger, which prevents its passage into the tube. The plunger-rod 13 is depressed and the worm pushed out. The instrument is then ready for operation again,

and before it is set aside to be used on another person the nipple is unscrewed and cleansed. The plunger is easily cleansed also, and the device when the parts are assembled
5 is again ready for use.

In employing our improved device the skin surrounding the worm is not irritated by excessive pressure, as is usually the case when a worm is "squeezed" out; but by reason of
10 the vacuum being under control of the operator he can exert just enough suction to draw out the worm and any pus or other matter frequently associated with the blackheads when they have festered.

15 Such being a full description of our newly-invented process and means for carrying the same into effect, what we claim as new, and desire to secure by Letters Patent, is—

1. An instrument for removing blackheads,
20 &c., comprising an inflexible hollow body provided with a flexible bottom, a tapering tube threaded in the upper end of the said body, the upper end of said tube being bent at an angle to the body portion thereof, and pro-
25 vided in its side wall with an opening in alignment with the bore of the said angular portion, a plunger arranged in the said angular portion, a stem connected to the said plunger

and having its outer end projecting through the said opening, a knob on said stem, and a
30 spring interposed between the said knob and the said tube, substantially as described.

2. In a device of the character described, the combination with a vacuum-chamber having an internally-screw-threaded end, a tube
35 provided with an externally-screw-threaded lower end secured in said chamber, said tube provided in its wall adjacent its upper end with an opening terminating at its outer end in a concave portion, a plunger in said tube,
40 a plunger-stem having its outer end projecting through the said opening, a knob on the end of said stem, a concavo-convex washer arranged in the said concave portion, and a
45 spring interposed between the said knob and tube and having its inner end bearing against the said washer, substantially as described.

In testimony whereof we have signed our names to this specification, in the presence of two subscribing witnesses, this 27th day of
50 January, 1902.

ALBERT A. C. HILDEBRANDT.

NORTON W. JOHNSTON.

Witnesses:

ISRAEL A. HAIGHT,
GEORGE W. HAIGHT.