

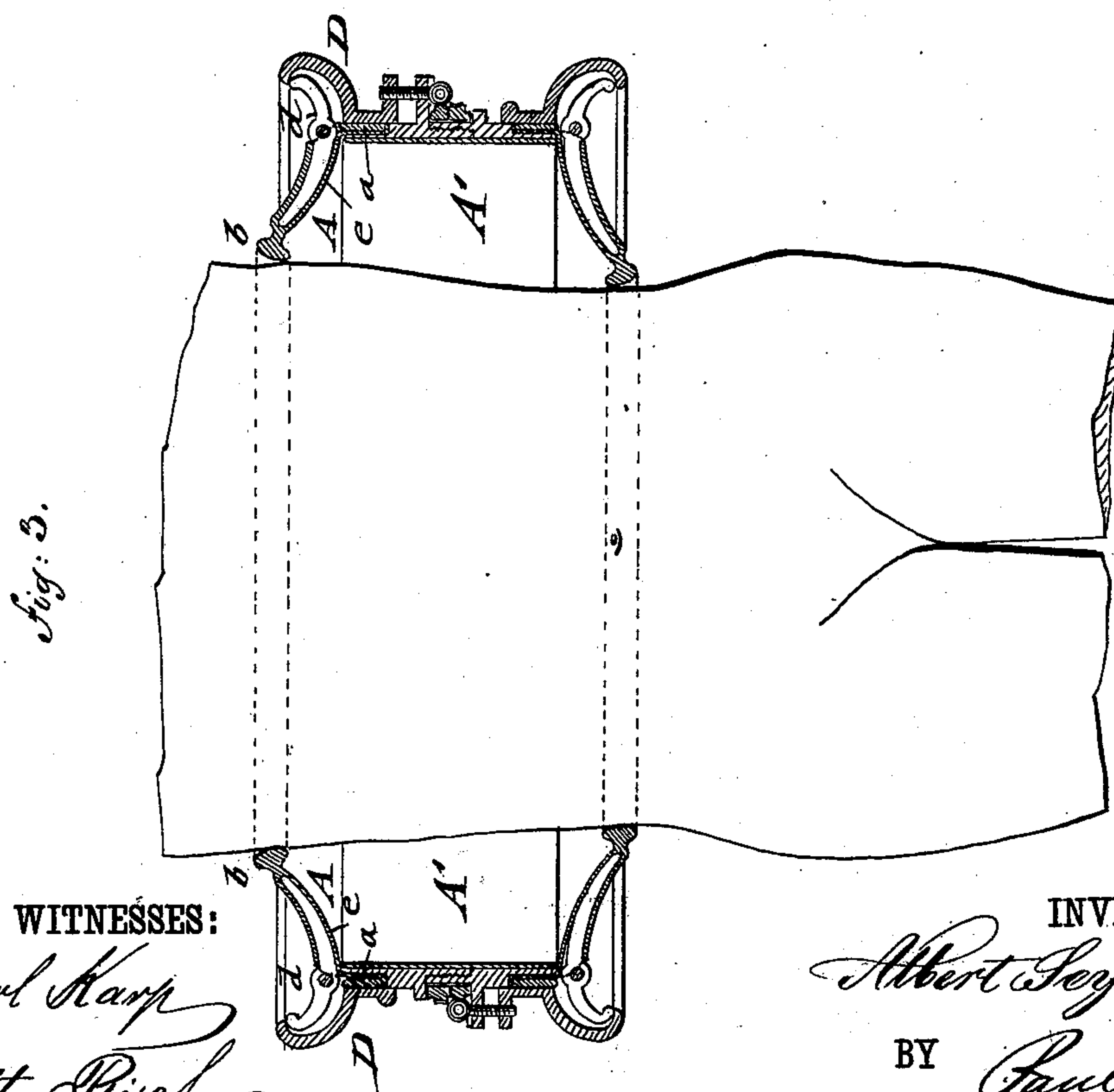
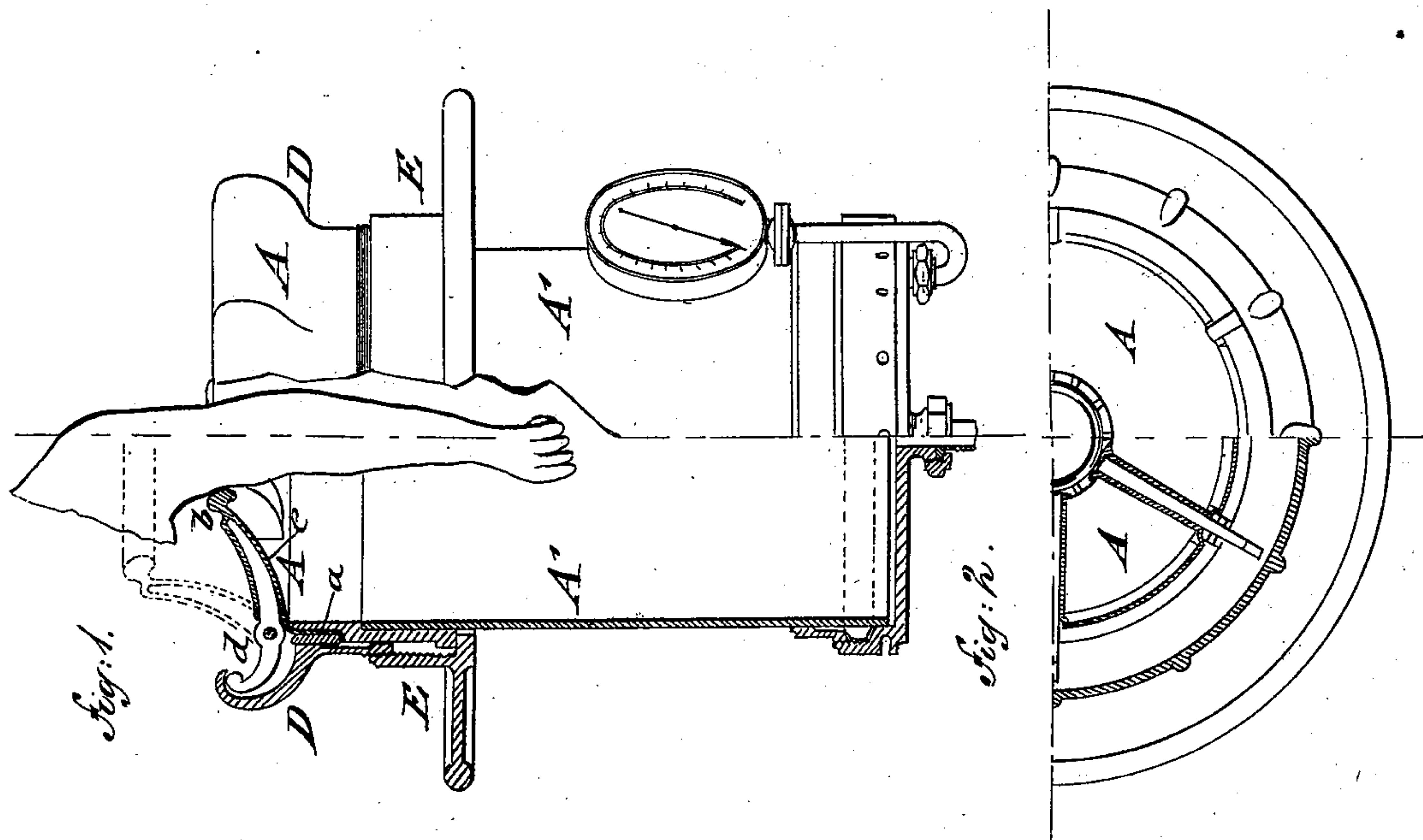
(No Model.)

2 Sheets—Sheet 1.

A. SEYBERLICH.
Depurator.

No. 230,351.

Patented July 20, 1880.



WITNESSES:

Carl Karp
Otto Pisch

INVENTOR:

Albert Seyberlich
BY *Paul Goepel*
ATTORNEY

(No Model.)

2 Sheets—Sheet 2.

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Fig: 4.

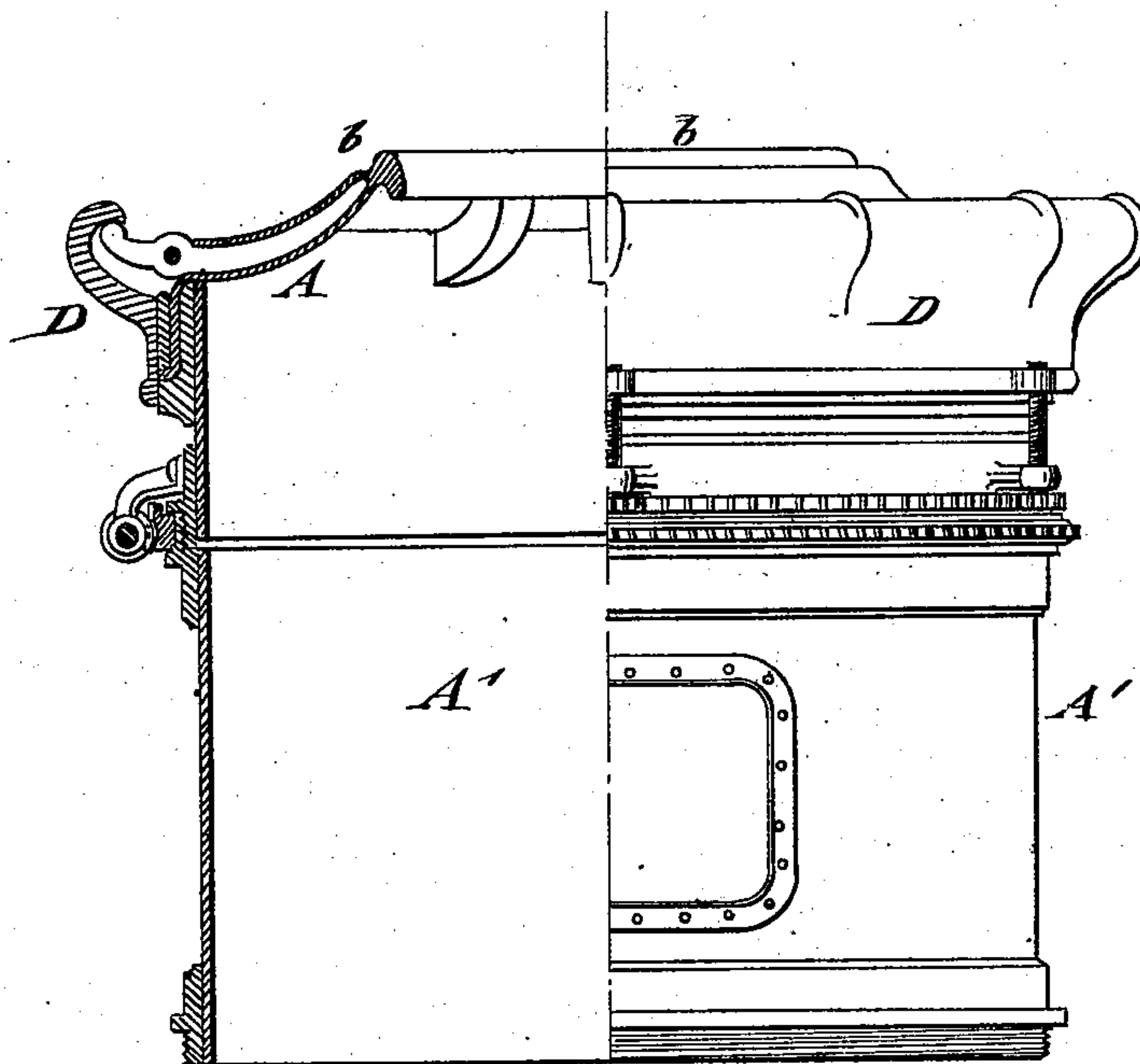
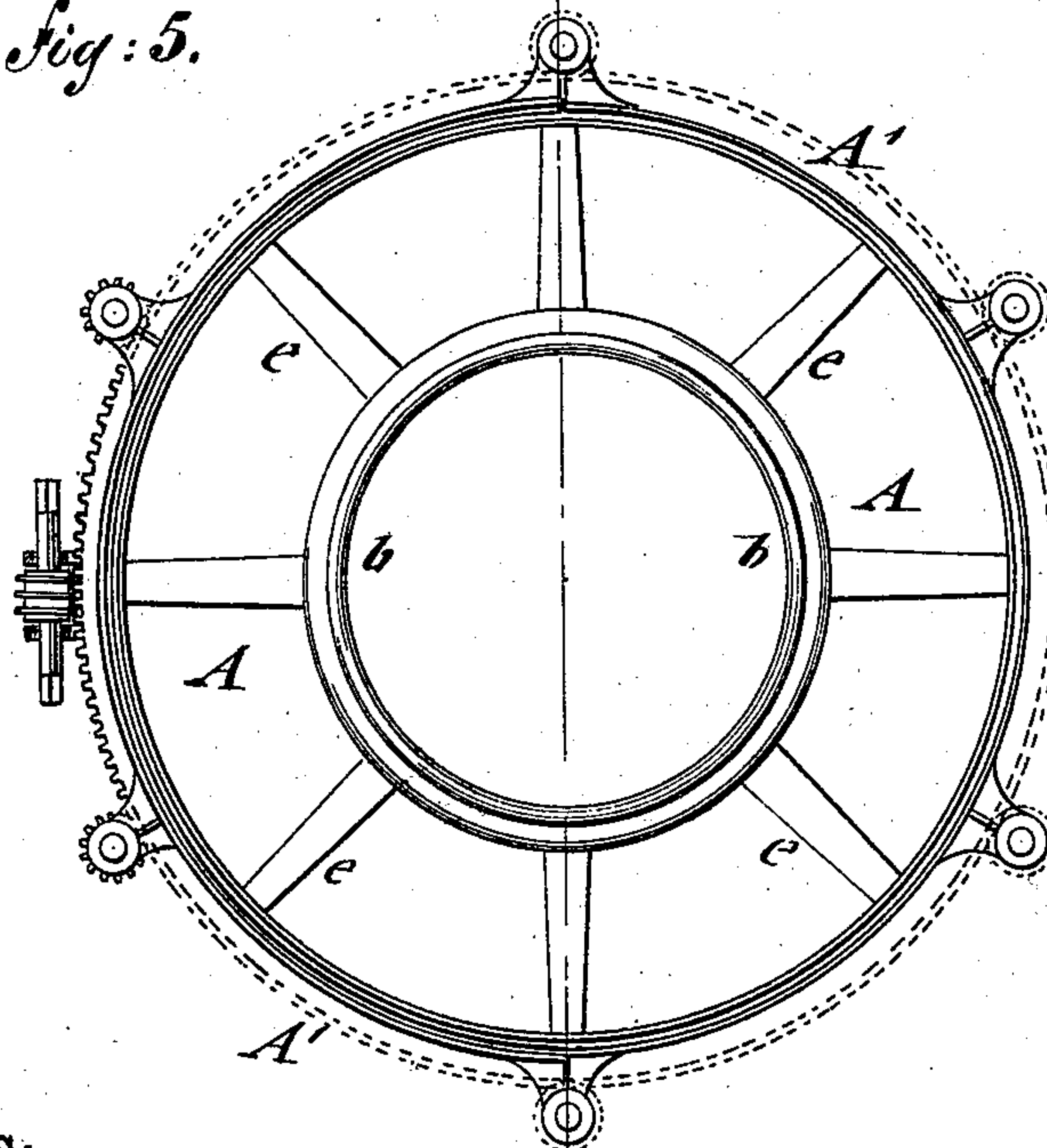


Fig: 5.



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UNITED STATES PATENT OFFICE.

ALBERT SEYBERLICH, OF FELDBERG, MECKLENBURG, GERMANY.

DEPURATOR.

SPECIFICATION forming part of Letters Patent No. 230,351, dated July 20, 1880.

Application filed June 2, 1880. (No model.)

To all whom it may concern:

Be it known that I, ALBERT SEYBERLICH, a resident of Feldberg, in the Grand Duchy of Mecklenburg, in the German Empire, have invented new and useful Improvements in Pneumatic Suction Apparatus for Medical Purposes, of which the following is a specification.

This invention relates to improvements in pneumatic suction apparatus for medico-surgical purposes, and more especially to improvements of that portion of the apparatus by which the hermetical connection with the limbs or other part of the body to be treated is produced.

In the pneumatic suction apparatus which was heretofore in use for medico-surgical purposes the mouth-piece consisted of an annular piece of soft rubber, which was provided at its upper side with pockets into which the ends of small levers were inserted, whose outer ends were engaged by the annular lip or flange of an adjustable screw-collar, while they were fulcrumed at their middle portion to the cylindrical body of the apparatus, so that by raising or lowering the collar the mouth-piece was contracted or enlarged, as required. This construction of the mouth-piece was found to be objectionable for several reasons. In the first place, the edge of the same exerted a cutting action upon the body to which the apparatus was applied; secondly, the pockets for the levers were liable to be torn, especially when it was attempted to enlarge the mouth-piece, owing to the fact that the pockets did not form such a component portion of the mouth-piece that they could resist the strain exerted thereon by the levers.

The object of this invention is to remove these objections and to so improve the construction of the mouth-piece that it can be tightly, yet without any inconvenience, applied to any part of the body to be treated, and also that the treating of the lever-pockets be dispensed with.

The invention consists of an annular elastic mouth-piece provided with an enlarged rim at its inner end, said mouth-piece being provided at the under side with pockets for the adjusting-levers, said pockets extending inwardly from a cylindrical extension of the mouth-

piece, by which the connection with the cylindrical main portion of the apparatus is made.

In the accompanying drawings, Figure 1 represents a sectional side elevation of my improved pneumatic apparatus for treating portions of the body by air-suction. Fig. 2 is a top view of the same, partly in horizontal section. Fig. 3 is a vertical central section of the apparatus, shown with elastic mouth-piece and bottom, adapted to be applied to the chest or abdomen. Fig. 4 is a vertical side elevation, partly in central section, of the apparatus constructed on a large scale, and Fig. 5 is a bottom view of the latter.

Similar letters of reference indicate corresponding parts.

A in the drawings represents an elastic mouth-piece, of soft rubber or other elastic material, and A' the cylindrical main portion or recipient of the apparatus, which is made of sheet metal and of any suitable size, so as to be adapted to any portion or the whole of the body.

The apparatus is closed at the lower part, either by a removable bottom, to which the pipe leading to the air-pump, as well as a pressure-gage, is connected, or it is closed by an elastic bottom of the same construction as the mouth-piece, the latter being used more especially when the apparatus is to be applied to the chest or abdomen, as shown in Fig. 3.

The mouth-piece A has a cylindrical lower portion or extension, *a*, by which it is secured to the upper part of the main portion or recipient A'. The mouth-piece A is provided at the under side with radial pockets *e*, which are open at the circumference of the cylindrical portion and serve for receiving small levers *d*, which are fulcrumed to a fixed ring or collar, *f*, at the upper part of the main body.

The collar or ring *f*, to which the levers are fulcrumed, serves at the same time for holding the cylindrical portion of the mouth-piece A in position on the upper part of the recipient. At the inner circumference the mouth-piece A is provided with an annular enlarged rim, *b*, which is shown clearly in section in the different figures of the drawings. This rim strengthens the inner part of the mouth-piece, and also forms a kind of support for the pockets, which

are thereby prevented from being torn by the levers. The main advantage of the rim consists, however, in the hermetical joint which it forms with the body, the rim adapting itself to the contours of the same without causing the least inconvenience by cutting.

The levers *d* are slightly curved and are all engaged at their outer ends by the inwardly-bent rim of a cylindrical collar, D, which is movable along the outer portion of the recipient A', either by means of a screw-nut, E, which extends over a projection of the upper part of the recipient A', or by means of a worm-wheel which intermeshes with a circumferential toothed ring of the recipient, the ring imparting motion to pinions of vertical adjusting-screws, as shown in Figs. 4 and 5.

The latter construction is more especially designed for apparatus of larger size, while the screw-nut and collar are preferable for apparatus of smaller size.

The cylinder D engages, by its up-and-down motion, the lever *d* of the mouth-piece, and causes the contraction or enlargement of the same, as shown clearly in Fig. 1, in which the dotted lines indicate the enlarged mouth-piece, while the full-drawn lines indicate it when contracted.

By means of this improved construction of the mouth-piece the pneumatic suction apparatus may be readily applied to any part of the body, and the same then exposed to the required treatment without any inconvenience.

If it be desired that the parts of the body should be treated with heat simultaneously to

treating them with suction, then the recipient A' is constructed with double walls, which are heated by means of steam, hot water, or otherwise.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a pneumatic suction apparatus, an annular elastic mouth-piece having an enlarged rim at its inner edge, substantially as set forth.

2. In a pneumatic suction apparatus, an elastic annular mouth-piece having an interior enlarged rim and pockets which extend at the under side of the mouth-piece from the rim to the outer cylindrical portion of the same, substantially as described.

3. In a pneumatic suction apparatus, the combination, of an elastic mouth-piece, A, having an inner enlarged rim, an outer cylindrical portion, and pockets at the under side with fulcrumed levers, with an exterior ring or collar, having inwardly-bent rim to engage the outer ends of the lever, and with mechanism, substantially as described, whereby the collar raises or lowers the levers and expands or contracts the mouth-piece, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALBERT SEYBERLICH.

Witnesses:

CARL FEHLERT,
BETHOLD ROI.