

(No Model.)

A. E. PERRY.
BUFFING PAD OR APPLIANCE.

No. 533,828.

Patented Feb. 5, 1895.

Fig. 1.

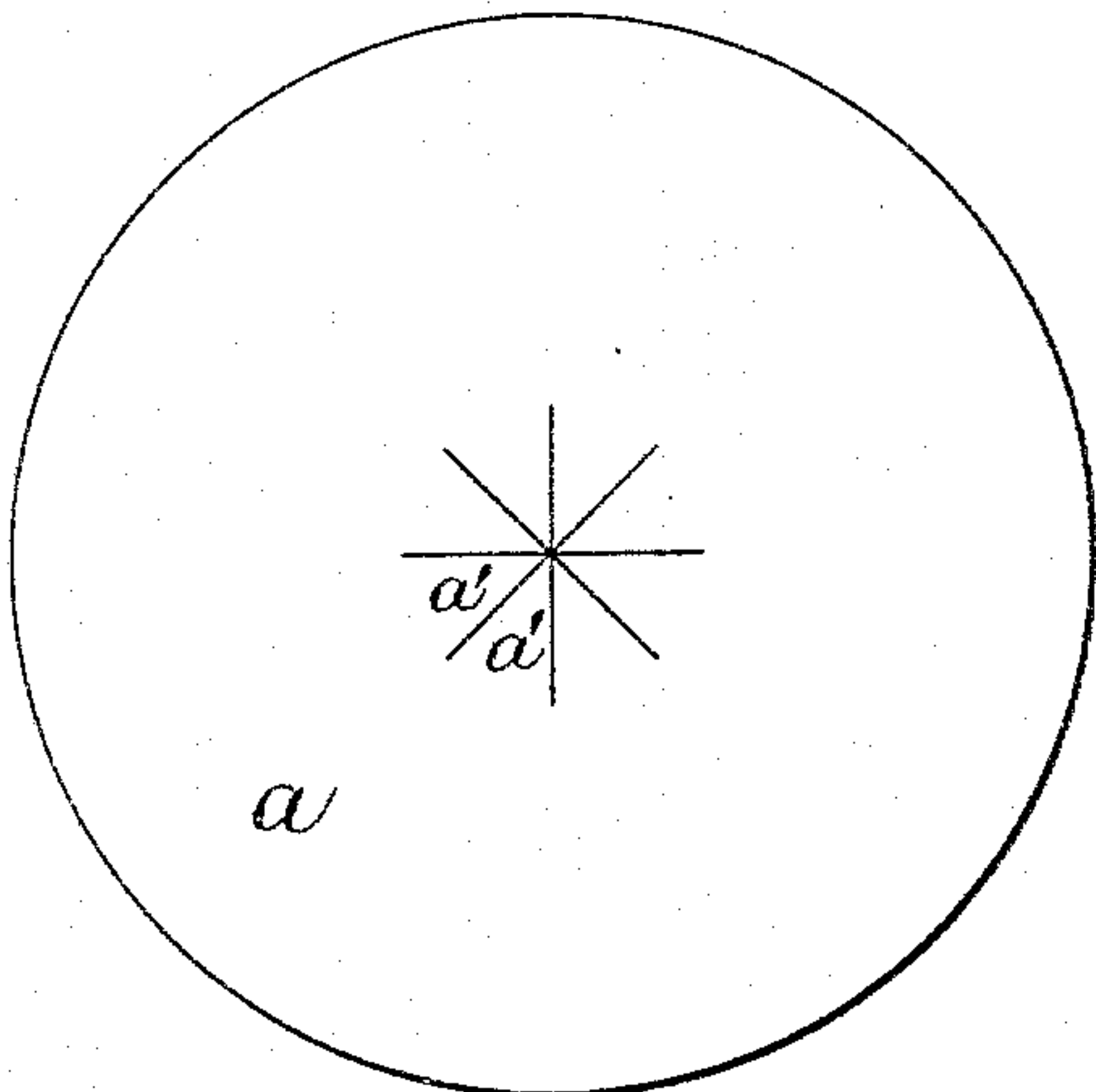


Fig. 2.

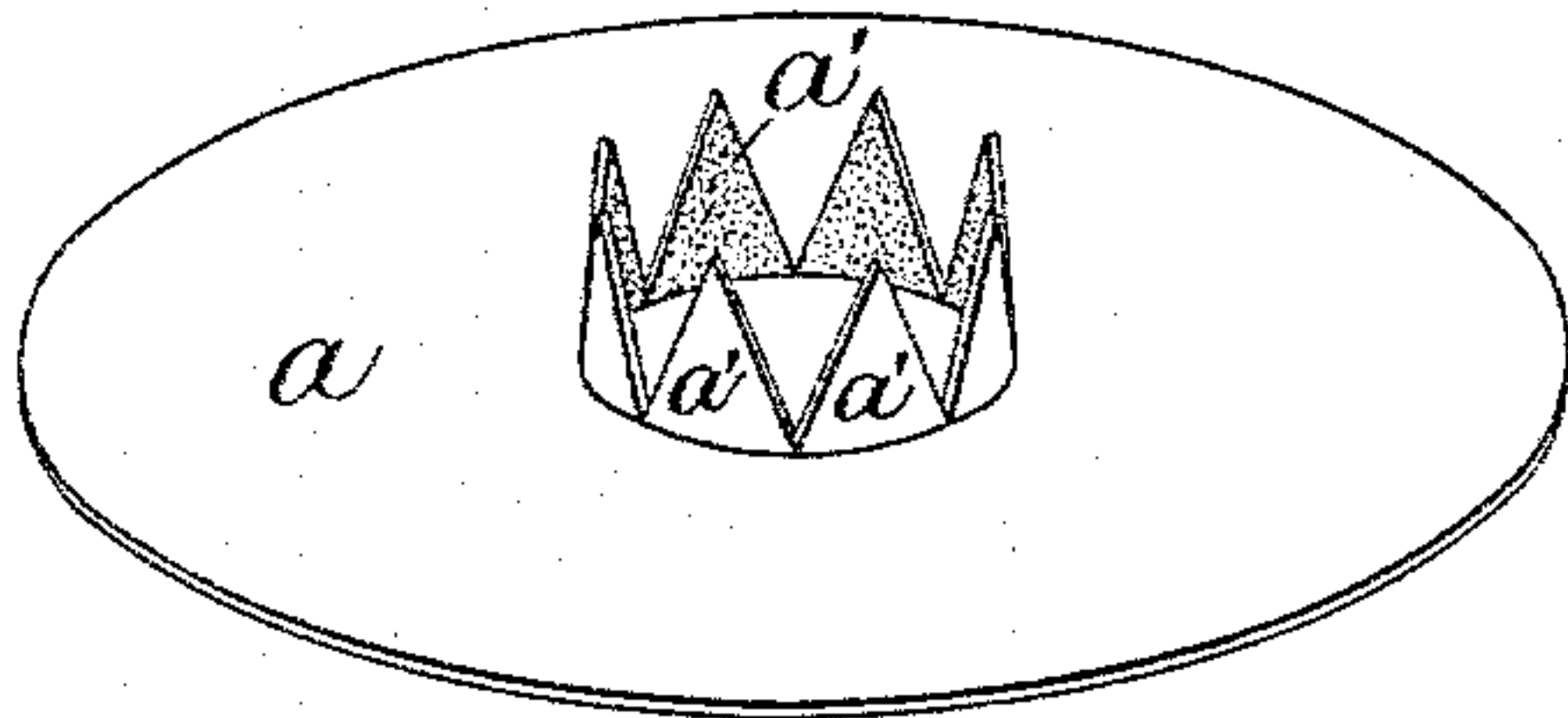


Fig. 3.

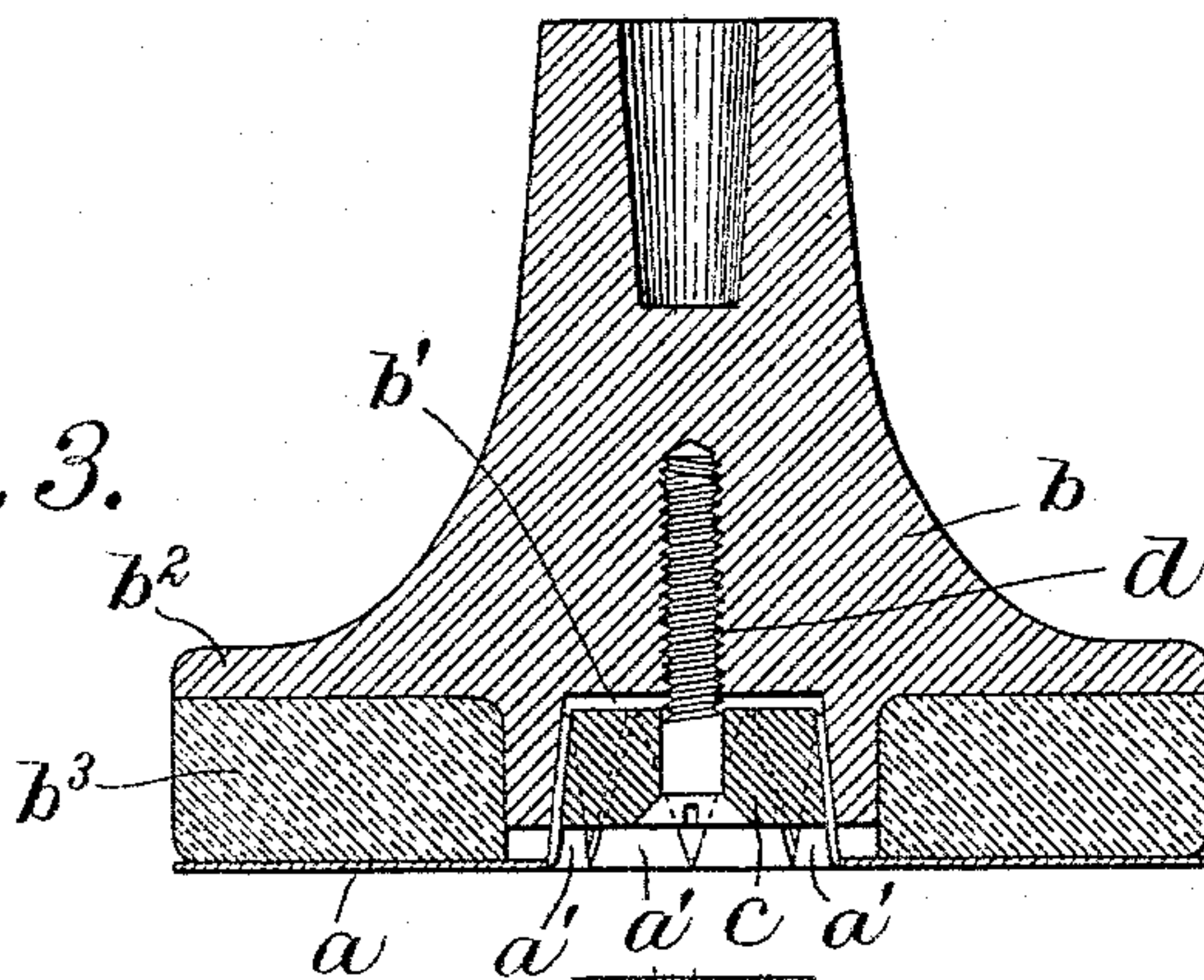


Fig. 4.

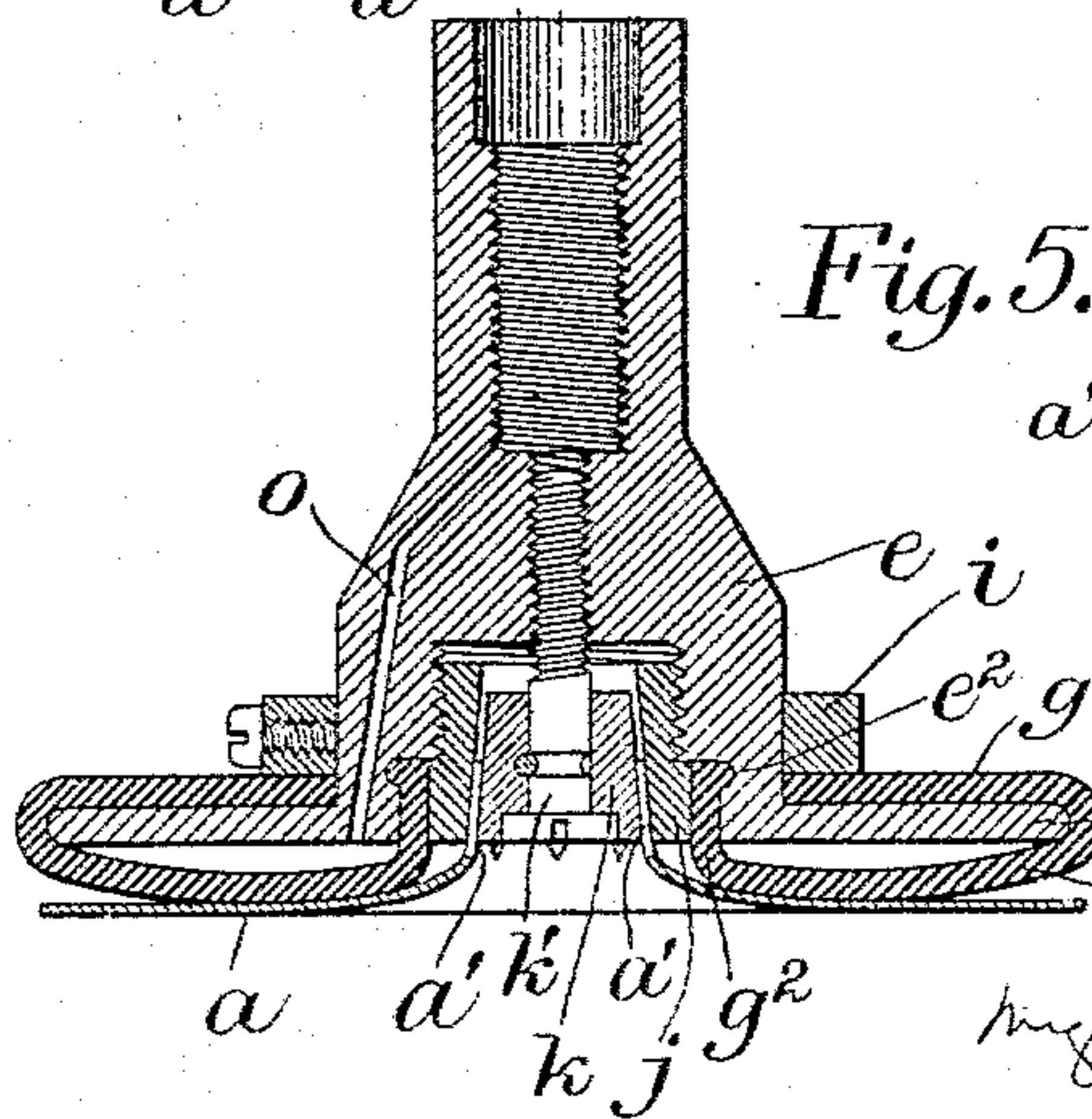
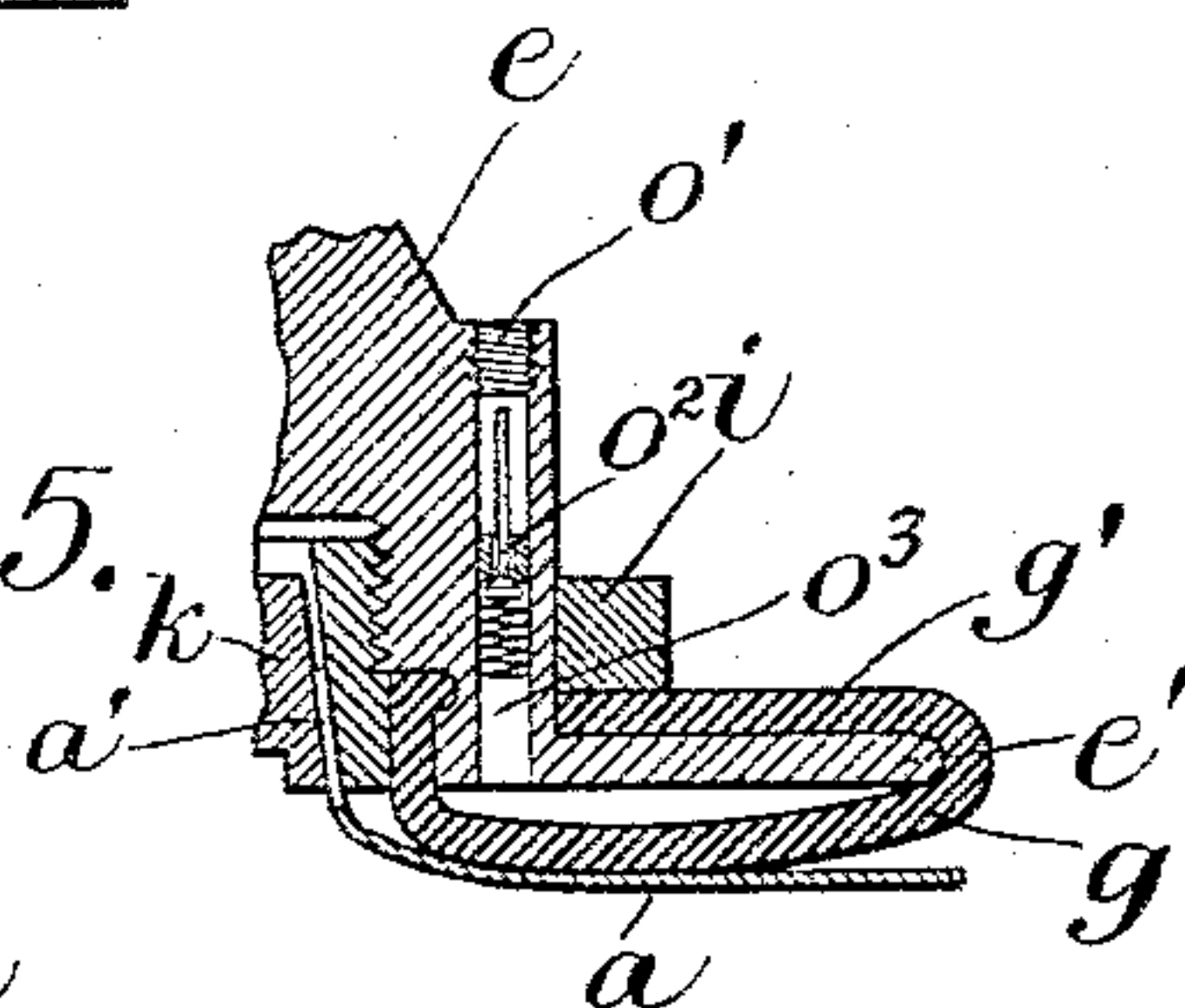


Fig. 5.



Witnesses:

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UNITED STATES PATENT OFFICE.

AUSTIN E. PERRY, OF WAKEFIELD, ASSIGNOR OF ONE-HALF TO WILLIAM GORDON, OF BOSTON, MASSACHUSETTS.

BUFFING PAD OR APPLIANCE.

SPECIFICATION forming part of Letters Patent No. 533,828, dated February 5, 1895.

Application filed November 30, 1894. Serial No. 530,325. (No model.)

To all whom it may concern:

Be it known that I, AUSTIN E. PERRY, of Wakefield, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Buffing Pads or Appliances, of which the following is a specification.

This invention relates to buffing-pads or appliances in which a pad of elastic or yielding nature is mounted on a shank or spindle the axis of which extends substantially at right angles with the supporting face of the pad, a pad-cover being employed having an abrasive outer surface and adapted to be supported by the yielding portion of the pad, the arrangement being such that the abrasive face of the pad-cover rotates in a plane substantially at right angles to the axis of rotation of the shank.

My invention has for its object to provide an improved construction of pad and pad-cover having in view the attachment of the pad-cover at its central portion to the corresponding portion of the pad.

The invention consists in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification,—Figure 1 represents a view of the blank from which my improved pad-cover is made. Fig. 2 represents a perspective view of my improved pad-cover. Fig. 3 represents a sectional view showing one form of pad and pad-cover embodying my invention. Fig. 4 represents a similar view showing the pad constructed to be inflated. Fig. 5 represents a sectional view of a modified form of the pad.

The same letters of reference indicate the same parts in all the figures.

In carrying out my invention, I make a pad-cover *a* by cutting a series of radial slits in the central portion of a flat disk of material suitable for a pad-cover, said material being, for example, the emery-cloth of commerce and therefore having an abrasive coating upon one side. The slits are preferably radially formed and convert the central portion of the blank into a series of pointed tongues *a'*. These tongues are bent upwardly from the back side of the pad, namely, the

side opposite that which has the abrasive coating, so that the tongues stand substantially at right angles with the body of the pad, and project from the back side thereof, as shown in Fig. 2, the completed pad having therefore a central opening and a series of tongues integral with the body of the pad, said tongues surrounding the opening and projecting from the back side of the pad. The pad thus constructed is adapted for use with a pad-holder having a central seat or cavity formed to bear upon the outer surfaces of the tongues and to co-operate with a plug or clamping member insertible in said cavity, the wall of the cavity forming one clamping member and the plug another clamping member, between which the tongues are firmly clamped, so that the pad-cover is securely attached to the pad at its central portion.

In Fig. 3, I show a simple form of pad having the clamping members above mentioned. In said figure, *b* represents the rigid portion which supports the pad or yielding portion on which the pad-cover directly bears. For the sake of convenience, I will call the portion *b* the pad-holder, the same having at one end a cavity *b'* which is preferably slightly tapering and larger at its outer than at its inner end, said cavity being formed to receive the series of tongues *a'*. *b²* represents an outwardly projecting flange which supports a cushion *b³* of felt or other suitable yielding material said cushion being of annular form and surrounding the portion of the rigid body that contains the cavity *b'*. *c* represents a plug or clamping member formed to enter the cavity *b'* and to bear upon the inner sides of the tongues *a'*. Said plug is formed to co-operate with the walls of said cavity in tightly grasping or clamping the tongues, and it may be secured to the body of the pad by any suitable means, such as by a screw *d*. The tongues *a'* are made of such length and the cavity *b'* of such depth, that the portions of the tongues which are held by the said clamping members are located sufficiently far above the acting face of the pad-cover so that there will be no liability of contact between the clamping member *c* and the boot or shoe sole or other article presented to the pad-cover.

In Fig. 4, I show a pad adapted to be cush-

ioned with air under pressure, and a suitable holder *e* therefor, adapted to be secured to one end of a shaft or spindle and provided with an outwardly projecting flange *e'* and
 5 with a cavity to receive the pad-tongues *a'* and a clamping member to co-operate with the wall of said cavity in clamping or holding said tongues. *g* represents an elastic rubber diaphragm formed to support the acting por-
 10 tion of the pad-cover and having an inwardly projecting flange *g'* formed to bear upon the upper side of the flange *e'*, and an upwardly projecting flange *g''* formed to enter a recess *e''* formed in the body or rigid por-
 15 tion of the pad. The flange *g'* is secured to the holder *e* by means of a clamping ring *i*, and the flange *g''* is secured within the cavity *e''* by means of a clamping sleeve or ring *j*, the latter being screw-threaded and engaged
 20 with an internal thread in the holder *e*. The inner surface of the clamping ring *j* constitutes one of the tongue-clamping members, the other member being a plug or collar *k* loosely mounted on a screw *k'* which is en-
 25 gaged with a threaded orifice in the holder *e*. Air is admitted into the space between the diaphragm *g* and the flange *e'* through one or more ducts *o* which may receive air through a duct in the spindle, said duct communicat-
 30 ing with an air pump which may be continuously operated by the power of the machine to which the pad is applied, or if preferred, the duct *o* may be supplied with air at intervals as may be required by means of a de-
 35 tachable air pump, suitable means being employed to retain in the diaphragm a charge of air that may be pumped into it.

It will be seen that in the construction shown in Fig. 4 the pad cover is held in the same
 40 manner as in the construction shown in Fig. 3, the pad cover being the same in both cases.

In Fig. 5 I show an air duct *o''* extended to the outer surface of the holder *e* and provided with a fitting *o''* to which an air pump
 45 may be applied, so that the cushion may be inflated like the tire of a bicycle and without removing it from the machine, a suitable valve *o''*, such as that used with pneumatic
 50 tires, being employed to prevent the escape of air from the cushion through the duct.

I claim—

1. A buffing-pad cover composed of a disk of flexible material such as emery cloth having an abrasive coating on one side, a central opening, and a series of tongues integral with
 55 the pad cover, said tongues projecting from the back of the cover and surrounding the opening.

2. A buffing-pad comprising a holder having a central tongue-receiving recess the wall
 60 of which constitutes a clamping member, a movable clamping member co-operating with said wall, and an annular yielding cushion surrounding said recess and projecting below
 65 the same whereby the pad is enabled to support the acting face of an abrasive cover below said clamping members.

3. In a buffing-pad, the combination of a holder having clamping members at its central portion, an annular cushion surrounding
 70 the clamping members and projecting below the same, and a pad having a series of tongues projecting inwardly through the cushion and confined between the said clamping
 75 members.

4. A buffing-pad comprising a flanged holder having an air duct and a central cavity, an annular diaphragm having a flange
 80 formed to extend over the flange of the holder and another flange formed to enter the cavity of the holder, clamping rings or collars *i* *j* for securing the flanges of the diaphragm to the holder, said collar *j* having its
 85 inner surface formed to serve as a tongue-clamping member, and a tongue-clamping plug formed to co-operate with the collar *j* in clamping central tongues on a pad cover.

5. A buffing-pad comprising a rigid holder having an air duct, an annular diaphragm secured to the holder and forming an annular
 90 air chamber communicating with said duct, and pad-clamping members located within the annulus of the diaphragm.

In testimony whereof I have signed my name to this specification, in the presence of
 95 two subscribing witnesses, this 21st day of November, A. D. 1894.

AUSTIN E. PERRY.

Witnesses:

A. D. HARRISON,
 ROLLIN ABELL.