

No. 621,131.

Patented Mar. 14, 1899.

F. P. PFLEGHAR.  
POLISHING WHEEL.

(Application filed Feb. 12, 1898.)

(No Model.)

Fig. 1.

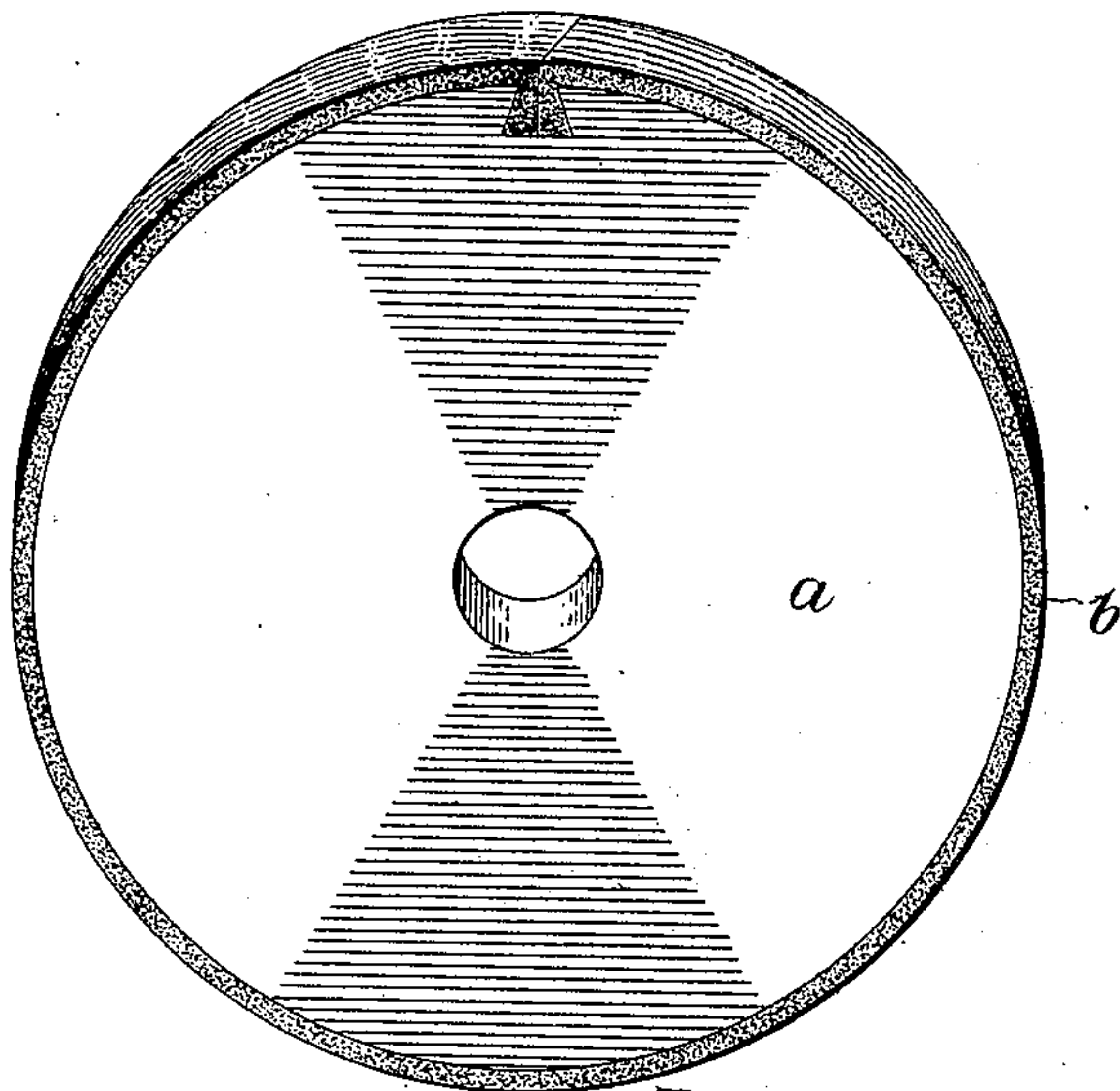


Fig. 3.

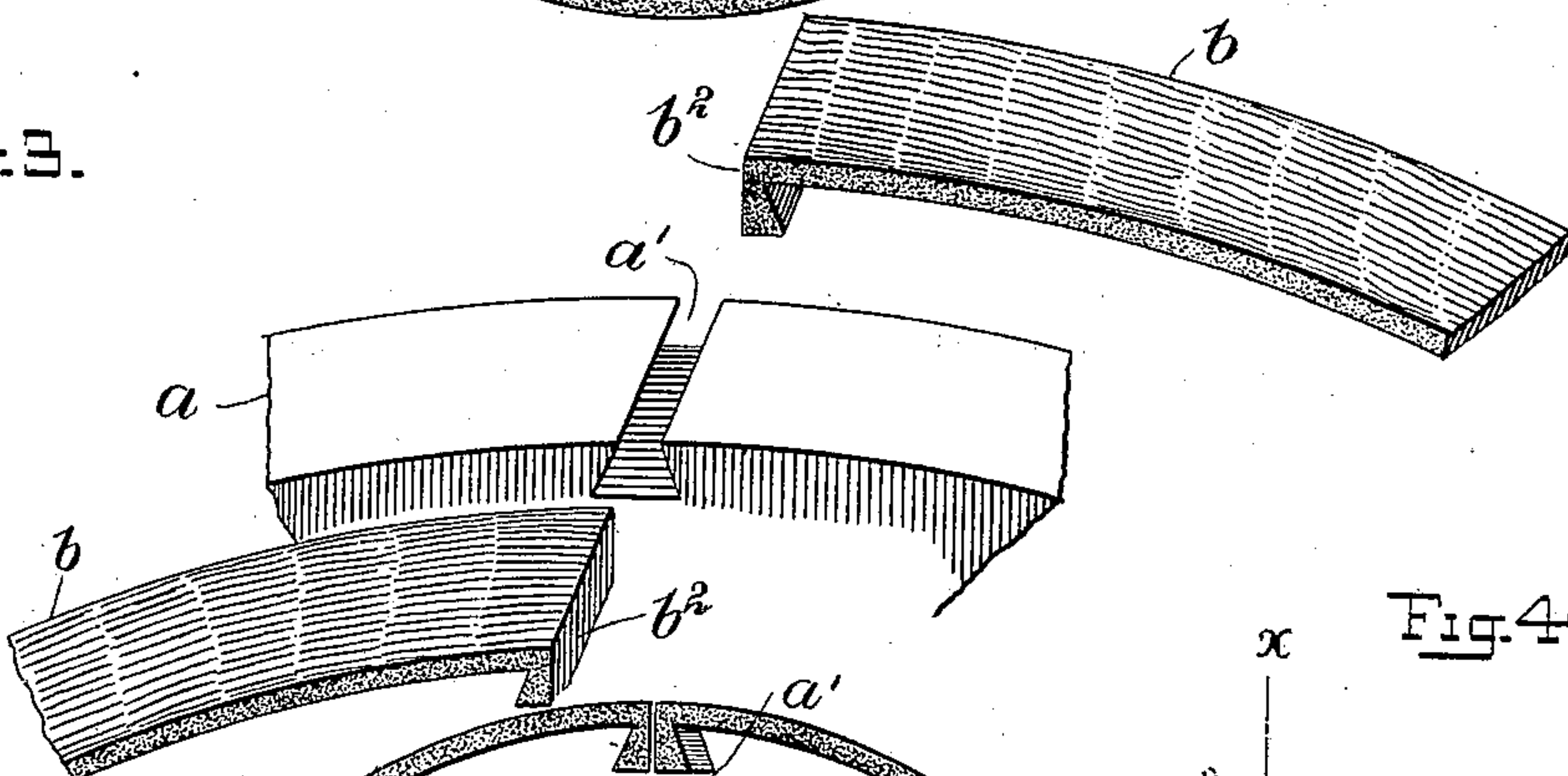


Fig. 2.

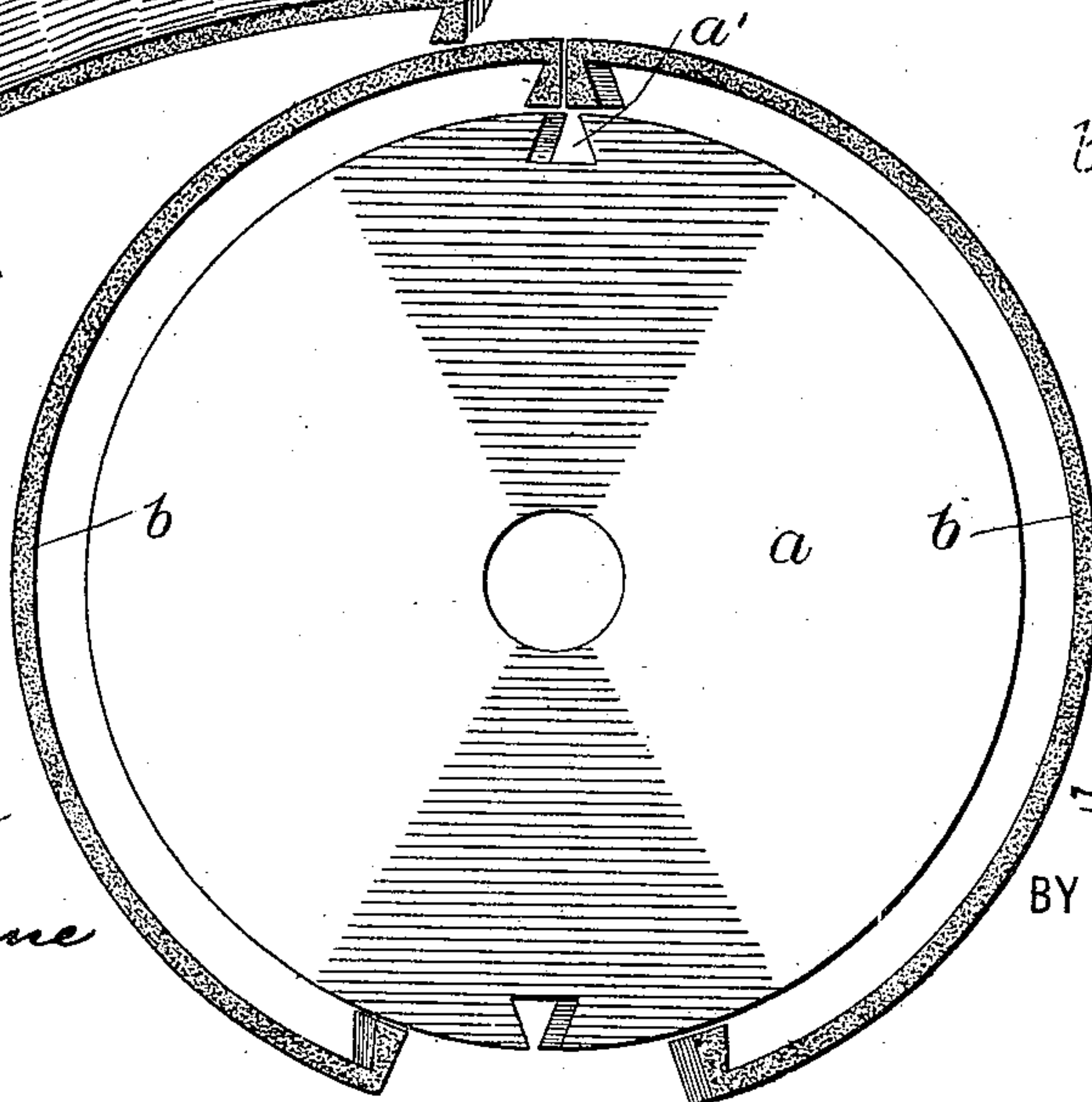
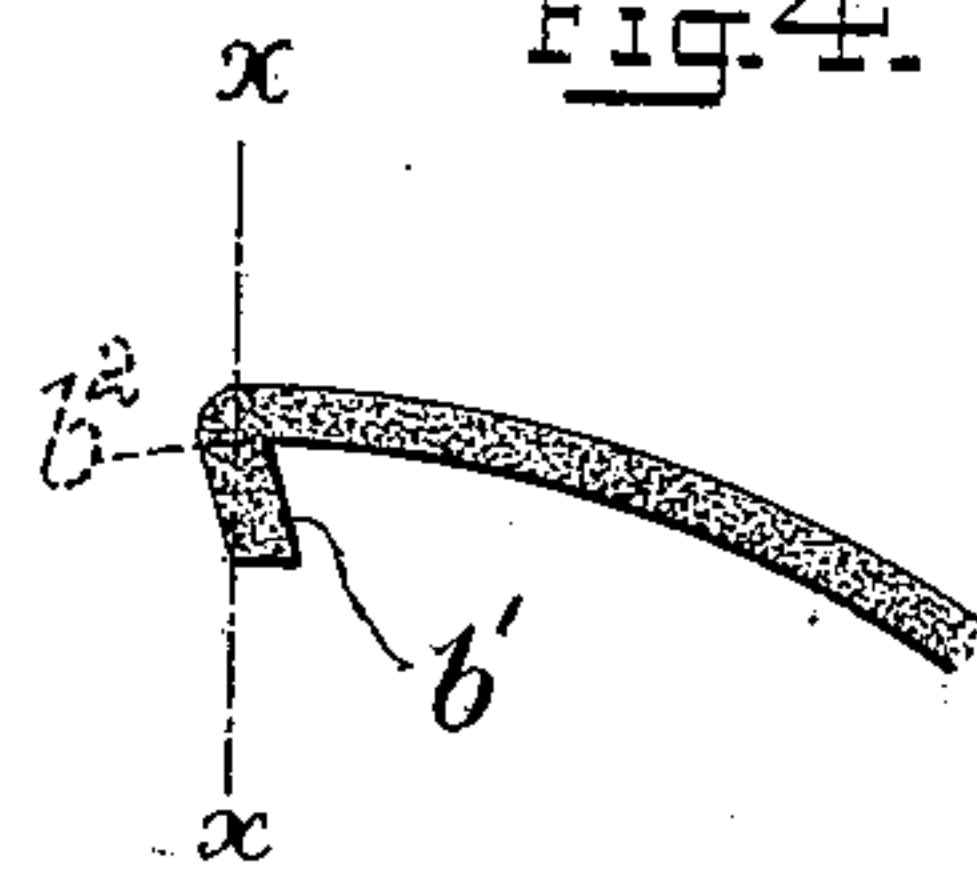


Fig. 4.



WITNESSES:

*Geo. W. Naylor*  
*Fred W. Dane*

INVENTOR

*Frank P. Pflegghar*

BY

*Chas. F. Dane*

ATTORNEY



# UNITED STATES PATENT OFFICE.

FRANK P. PFLEGHAR, OF NEW HAVEN, CONNECTICUT.

## POLISHING-WHEEL.

SPECIFICATION forming part of Letters Patent No. 621,131, dated March 14, 1899.

Application filed February 12, 1898. Serial No. 670,027. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK P. PFLEGHAR, a citizen of the United States, and a resident of the city and county of New Haven, State of Connecticut, have invented new and useful Improvements in Polishing-Wheels and in Methods of Constructing the Same, of which the following description, taken in connection with the drawings herewith accompanying, is a specification.

My invention relates to that class of polishing-wheels which consist of a disk or wheel having its periphery covered with a band or strip of leather or other similar material to produce a desired friction-surface. It is desirable in this class of wheels that the friction or polishing surface be smooth and practically continuous and unbroken, and in order to provide such a surface it has been the most usual practice to secure the peripheral band upon the supporting-disk by glue or other adhesive material with its opposite ends closely abutting against each other. It has been found in practice, however, that the said abutting ends become loosened after more or less continuous use by reason of the glue or other adhesive material adjacent to said ends becoming heated by the friction produced by the object held in contact with the wheel, and thus allowing said ends to become loosened from the supporting-disk. When one or both of the ends become thus loosened during the operation of the wheel, which is very rapid, the danger to the operator or person holding the object being polished is very great by reason of the liability of being struck by the loosened ends or the object held being struck from the operator's grasp by such ends.

Having in mind the above objectionable features, it has been the object of my present invention to provide a polishing-wheel having a peripheral band so formed and secured thereon as to prevent possibility of its ends becoming loosened from the disk and which will present a smooth and practically continuous unbroken surface. I accomplish this object by the practice of the methods and the construction and arrangement of the parts as hereinafter set forth in detail and pointed out in the claims.

Referring to the drawings, Figure 1 repre-

sents a polishing-wheel embodying my invention. Fig. 2 represents a wheel and its peripheral polishing-strip disconnected from each other, and Figs. 3 and 4 are detail views to be hereinafter referred to.

To explain in detail, *a* represents the body of the wheel, which may be of any suitable material or construction, and *b* the band or strip, which is secured upon the periphery of said wheel to form its polishing-surface.

According to my invention the disk or wheel *a* is provided with a transverse diagonally-arranged groove *a'*, extending across its periphery, into which the ends of the band *b* are adapted to be located and secured in a manner as will be described.

Preparatory to placing the band *d*, which is preferably formed of leather, upon the disk *a* its ends are first cut diagonally to correspond with the angle of the groove *a'* in the disk *a*. The said ends are then wet to render the same pliable and capable of being bent or set into a desired form, after which they are set by a suitable form or press to extend at an acute angle relative to the length of the strip, as at *b'* in Fig. 4. After the ends of the strip or band have been thus set the face sides *b<sup>2</sup>* of the same are then cut through a line, as at *x x* in Fig. 4, extending at substantially right angles to the length of the strip, so that when the ends of the latter are brought together, as shown in Fig. 1, the said face sides *b<sup>2</sup>* of the same will closely abut against each other to form a close joint at their upper edges, while the bent or set ends will present a dovetail for location within the said groove *a'* in the disk *a*, the sides of which groove are undercut to form a dovetail connection with said ends, as shown.

In securing the band or strip *b* upon the disk *a* glue or other adhesive material is first preferably placed within the groove *a'* in the latter and upon the opposite face ends *b<sup>2</sup>* of the band, after which the said band is placed around the periphery of the disk with its ends opposite the ends of the groove *a'*, as shown in Fig. 3. The said ends are then entered into the groove from its opposite ends and by reason of the diagonal arrangement of the groove are caused to draw and clamp the band upon the disk with an increasing



pressure as they are forced into their proper position opposite to each other, as shown in Fig. 1.

The dovetail form of the inwardly-turned ends of the band prevents such ends from being drawn out through the upper side of the groove when being forced therein under pressure and also serves to firmly lock the same in connection with the disk after being forced into position. The said ends of the band are also held in position within the groove *a'* in addition to the dovetail connection, as described, by means of the glue or other adhesive material located within the groove and upon the ends of the band, as before referred to.

Referring to Fig. 2, I have shown the disk *a* provided with two grooves arranged at opposite sides thereof and the band *b* in two sections, the ends of which latter are adapted to be entered into the grooves in the disk in the same manner as before described relative to Figs. 1 and 3. I employ this construction in some instances in making large wheels, as the leather band being heavier and less flexible can be clamped and secured more closely upon the disk.

Having thus set forth my invention, it will be obvious that the same may be more or less materially modified without departure from the spirit of the invention, for

What I claim, and desire to secure by Letters Patent, is—

1. A polishing-wheel, consisting of a disk or wheel having a groove with undercut sides extending diagonally across its periphery, and a peripheral band located upon said disk or wheel with its ends fitted into the said groove.

2. A polishing-wheel, consisting of a disk or wheel having a groove with undercut sides extending diagonally across its periphery, and a peripheral band located upon said disk or wheel with its ends extending into the groove therein, the face side of said ends being flat to abut against each other and their rear or opposite sides being tapered to engage with the undercut sides of the groove.

3. A polishing-wheel, consisting of a disk or wheel having a groove extending diagonally across its periphery, and a peripheral band having bent or turned-in ends fitting into the said groove, said turned-in ends being bent on a line diagonally to the length of the band and acting in combination with the sides of the groove, when being located therein, to stretch the band upon the disk or wheel, substantially as set forth.

FRANK P. PFLEGHAR.

Witnesses:

F. L. BUCKINGHAM,  
JAMES J. CONNOLLY.