

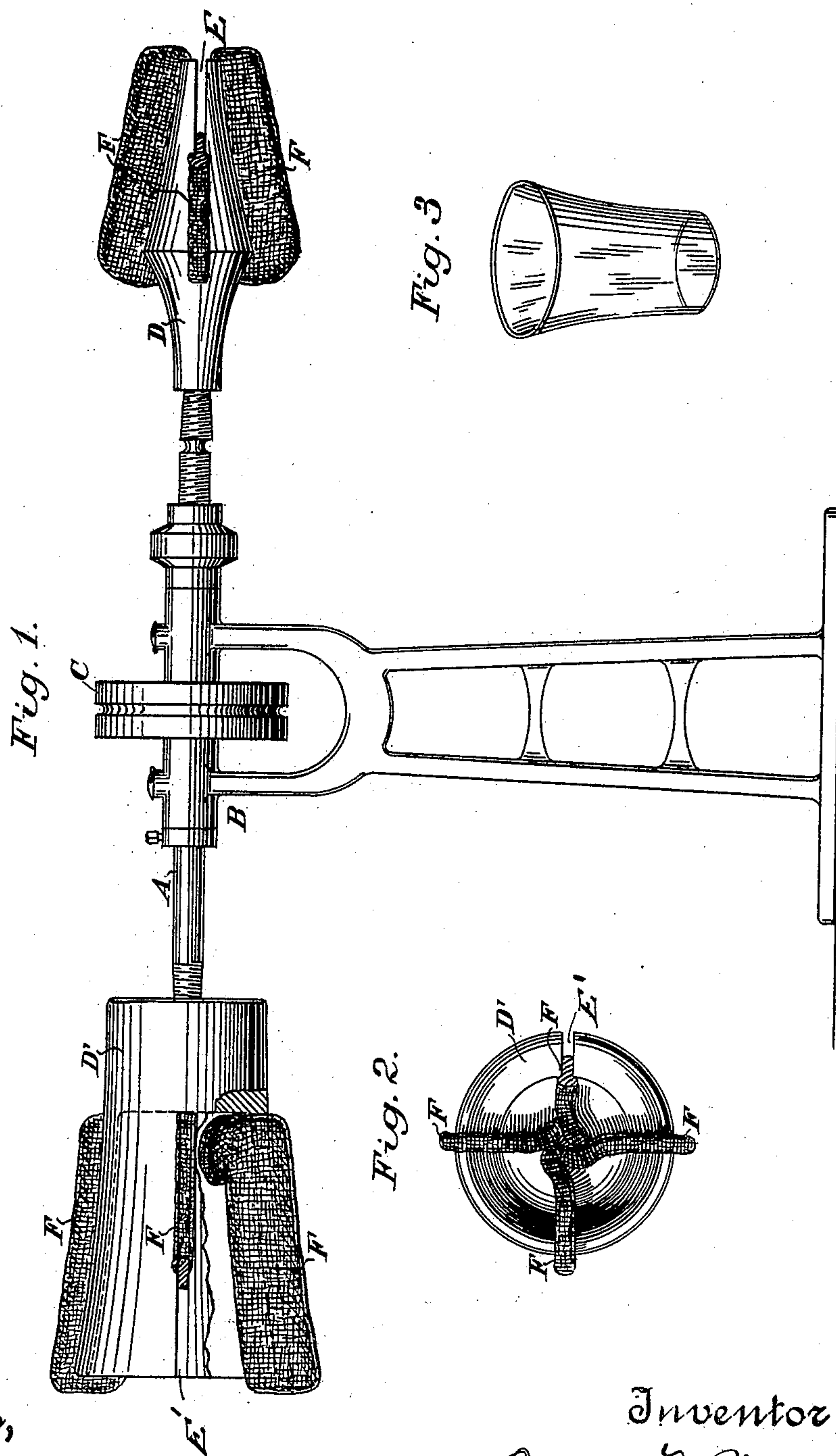
No. 620,250.

Patented Feb. 28, 1899.

O. F. PIRA.
CUP POLISHING APPARATUS.

(No Model.)

(Application filed Mar. 15, 1898.)



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UNITED STATES PATENT OFFICE.

OSCAR F. PIRA, OF OAKLAND, CALIFORNIA.

CUP-POLISHING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 620,250, dated February 28, 1899.

Application filed March 15, 1898. Serial No. 673,925. (No model.)

To all whom it may concern:

Be it known that I, OSCAR F. PIRA, a citizen of the United States, residing at Oakland, county of Alameda, State of California, have
5 invented an Improvement in Cup-Polishing Apparatus; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to an apparatus which
10 is especially designed for the rapid cleaning and polishing of the interior and exterior of glass cups.

It consists, essentially, of a suitably-journaled double-ended spindle having a pulley,
15 by which it may be rotated, and right and left screw-threads at its opposite ends, heads fitted, respectively, upon said ends, one of said heads being tapered and carrying an exterior polishing-surface and the other cup-
20 shaped with a correspondingly interior polishing-surface, so that the article to be cleaned and polished is first inserted in the hollow head and the exterior polished and then applied to the opposite head and the interior
25 polished.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a longitudinal elevation of my apparatus. Fig. 2 is an end view of the
30 head D'. Fig. 3 is a view of a communion-cup.

The object of my invention is especially to provide a means for the rapid cleaning and polishing of individual communion-cups,
35 such as are now being employed in the communion service of churches. These cups are made of glass, very small, and with the sides gradually expanding in a curvature from the bottom to the top. From sixty to three thousand of these cups are employed at each communion service, and it is necessary to thoroughly clean all of them after use. I have
40 therefore devised an apparatus for rapidly and efficiently cleansing and polishing them, which consists of a shaft A, journaled in a suitable support B, and having a pulley C, through which power may be applied to rotate it. The ends of this shaft project outwardly from the supporting-journals and are
45 tapered, as shown, one end having a right and the other a left screw-thread, so that the head D may be screwed upon one end and

the head D' upon the other end, and when the shaft is rotated and any pressure brought upon these heads the tendency will be to
55 screw them tighter upon the spindle. Both heads have a threaded socket in their inner ends and extending only part way through them, and said heads are of one integral piece and peripherally slotted from their outer ends
60 to a point near their inner ends, leaving sufficient solid material back of the ends of the slots to form secure holding-sockets for the ends of the shaft. The head D has its outer end made tapering, growing smaller from its
65 largest diameter toward the end, and it has slots E made in it, into which the absorbent flexible fibrous polishing cloth or material F is readily drawn and from which it may be easily removed. The edges of the polishing-
70 cloth projecting exterior to the conical portion of the head serve, when the device is rotated, to polish the interior of the cup, which approximately fits over the end of this head. It will be seen that by holding the glass momentarily
75 over this polishing device while it is being rotated it will be absolutely cleaned and polished on the interior. The opposite head D' is enlarged toward the outer end, and is chambered so that the interior is approximately
80 the same shape as the exterior of the cup to be polished. The sides of the hollow head are also slotted transversely at E', and a similar polishing material F is drawn into the slots, the inner surface being folded or carried
85 around the inside of the cup, so that it practically forms a polishing-surface.

Any suitable cleaning or polishing material may be applied to the cloths.

When the cups are to be cleaned, they are
90 first taken upon the end of the finger, or, if desired, a suitable elastic holder of proper diameter, which is inserted into the cup, the small diameter of the cup being sufficient to hold it either upon the finger or other holder,
95 and the exterior of the cup being introduced into the rapidly-rotating cup-shaped cleaning device will be immediately cleaned and polished. The cup is then placed upon the opposite end and the interior cleaned and
100 polished in the same manner, the whole operation taking but an instant and leaving the cups in condition for future use.

Having thus described my invention, what

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

5 An improved apparatus for polishing the exterior and interior of hollow vessels of tapering form, consisting of a horizontally-journ-
10 aled shaft, having one end provided with right-hand screw-threads and the opposite end provided with left-hand screw-threads, tapering integral heads on said ends, one of
15 said heads having a gradually-increasing diameter from its outer to its inner end and the other head having a gradually-decreasing di-
20 ameter from its outer to its inner end, said last-named head being hollow to receive the

vessel to be cleaned and both heads having a 15
screw-threaded socket made part way through the inner ends, to receive the ends of the shaft, said heads having slots made in them and extending through the outer end and ter-
20 minating short of the inner or socketed end, an absorbent fibrous material secured in said slots, and means whereby the shaft is rotated.

In witness whereof I have hereunto set my hand.

OSCAR F. PIRA.

Witnesses:

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