May 12, 1925. 1,537,520

G. E. ABBOTT

BURNISHING BARREL

Filed Aug. 26, 1921

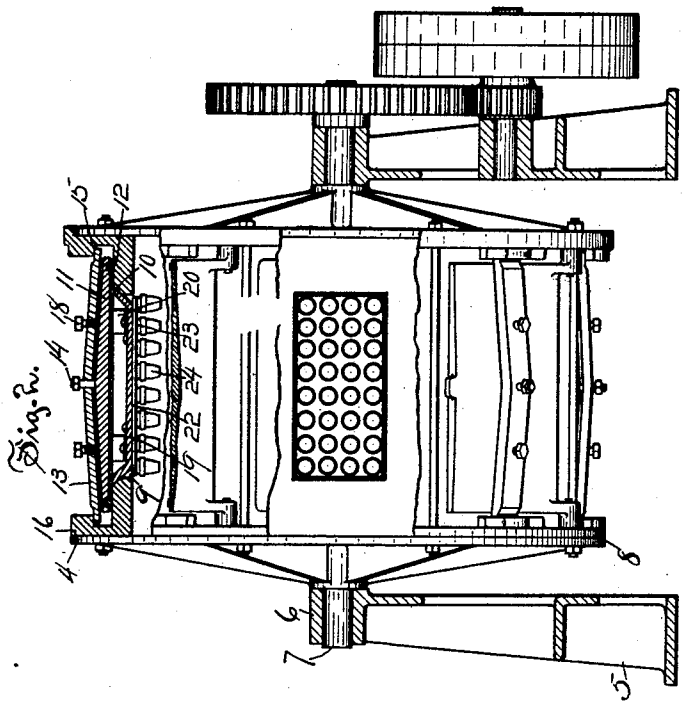


Fig. 2.

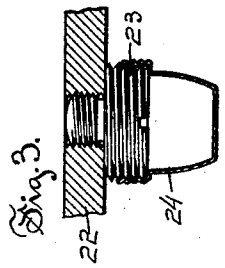


Fig. 3.

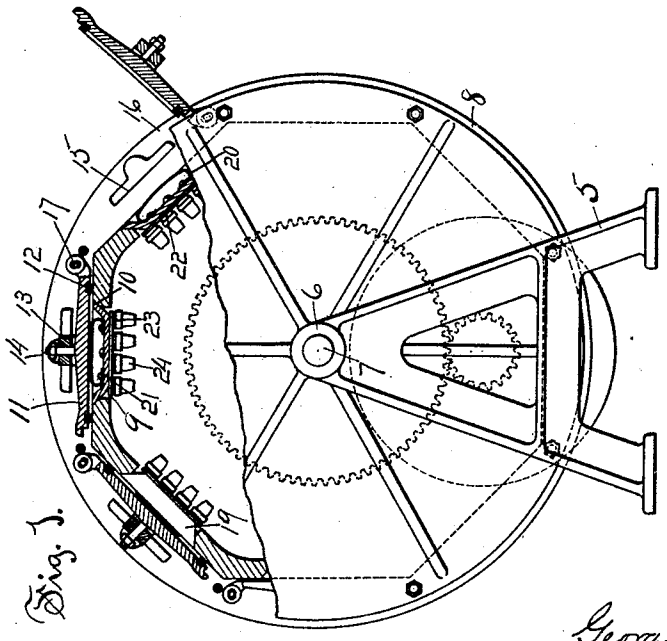


Fig. 1.

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Patented May 12, 1925. 1,537,520

UNITED STATES PATENT OFFICE.

GEORGE E. ABBOTT, OF WEST HARTFORD, CONNECTICUT, ASSIGNOR TO THE ABBOTT BALL COMPANY, OF WEST HARTFORD, CONNECTICUT, A CORPORATION OF CONNECTICUT.

BURNISHING BARREL.

Application filed August 26, 1921. Serial No. 495,521.

To all whom it may concern:

Be it known that I, GEORGE E. ABBOTT, a citizen of the United States, and a resident of West Hartford, in the county of Hartford and the State of Connecticut, have invented a new and Improved Burnishing Barrel, of which the following is a specification.

My invention relates to that class of devices that are adapted to contain the articles to be burnished and other material acting as the burnishing agent, which device is subjected to movement to cause the articles to be subjected to the burnishing action of the burnishing material.

One form of device embodying my invention, and in the construction and use of which the objects herein set out, as well as others, may be attained, is illustrated in the accompanying drawings, in which—

Figure 1 is a view in side elevation of my improved burnishing barrel with parts broken away to show construction.

Figure 2 is a view in front elevation of the barrel with parts broken away to show construction.

Figure 3 is a detail view illustrating the manner of attaching the work to be burnished to the work holder plate.

In the accompanying drawings the numeral 5 indicates supports, adapted to rest upon the floor, there being preferably two of these supports located at opposite ends of the barrel, each support being provided at its upper end with bearings 6 for the journals 7 of the barrel 8. The parts just described are of old and well-known construction, and the barrel, as to its general construction may be of any well-known form, my invention having to do with the means for supporting the articles to be burnished within the barrel.

The barrel, in its preferred form, is constructed with several sides, eight being shown herein, and each of these sides is provided with an opening 9 through which the burnishing material may be placed in the barrel and which openings are closed by covers each of which, as illustrated and described herein, embodies my improvement. The edges of the openings 9 are preferably beveled as at 10, a cover plate or cover 11 extending across and overlapping the opening to a considerable extent on opposite sides, this cover plate being provided with a packing 12 located in a recess in the under surface of the plate. A cover clamp 13 is attached to the cover plate as by means of a cover stud 14, this clamp being in the form of a bar and being loosely supported on said stud with its ends formed and located to be passed under clamping shoulders 15, formed on flanges 16 extending around the barrel at opposite ends thereof, the ends of the barrel being formed in any suitable manner. Each of the covers 11 is hinged upon a hinge rod 17, extending lengthwise of the barrel, the opposite ends of these rods being secured within the peripheral flanges 4. Clamp bolts 18 are supported by each of the clamps 13 in position to be forced against a cover, whereby the cover is forced tightly into engagement with the outer surface of the barrel and the clamp is forced tightly into engagement with the shoulders 15.

Each of the openings is provided with a device for supporting the work or articles to be burnished, each of these devices comprising a work holder 19 of a shape corresponding to that of the opening 9, which holder is beveled to fit the beveled portion 10 of the opening and the holders thereby closing said openings. The beveled edges of each holder are formed by making such holders of dished shape, and each holder is resiliently held in place against its seat on the beveled opening as by means of springs 20, secured within the recess formed by the dished shape on the outer face of each holder, the springs being positioned to receive the plates 11 that press against the springs and thereby firmly retain the work holders in place. These springs are each formed with back-turned feet 21 to receive bolts or screws by means of which the springs are secured to the holders, such springs being bowed from the feet to serve as handles as a means for removing the work holders.

A work holder plate 22 is removably secured to each work holder on its inner face and preferably in position to lie within the barrel. The means for removably securing the plate in position may be of any sort, as screws passing through open-

ings in the plate. Each plate is provided with a fixture or fixtures 23 to which the articles to be burnished are secured. These fixtures are preferably removably secured to the holder plate and each fixture or set of fixtures will be especially constructed to receive and hold articles of a certain construction to be burnished within the barrel. The fixtures herein shown comprise threaded studs, the threads on which are arranged to receive screw-caps 24, which caps are common to vacuum bottles. In place of the screw threads any other means for attachment of the articles of specific construction to be burnished may be employed.

This construction enables a plurality of sets of work holders to be employed for a single barrel, whereby, when one set of such work holders is in use for burnishing purposes in the barrel another set may be in use in having the articles attached thereto for burnishing purposes, and in this way a barrel may be kept in substantially constant use, one set of holders being filled with the articles to be burnished while another set is in use in the barrel for burnishing purposes.

Similarly the removability of the work holder plates 22 enables a limited number of sets of such plates to be employed, as, when a change is required in the nature of the fixture, by reason of a change in character of the work to be burnished, the fixtures of one sort may be removed from the plates and fixtures of another sort, and suitable for attachment of articles of another kind, may be attached to the plates.

The invention has been referred to herein as embodied in a burnishing barrel, but it will be understood that such invention is equally applicable to various structures, movably mounted and containing materials or articles for action on other articles or materials, whether such action be an abrading, a cutting-down, a finishing or any other action, and the term "burnishing barrel" whenever used in this specification will therefore be understood as including and covering all such other devices.

In accordance with the provisions of the patent statutes I have described the principles of operation of my invention, together with the apparatus which I now consider to represent the best embodiment thereof; but I desire to have it understood that the device shown is only illustrative and that the invention may be carried out by other means and applied to uses other than those above set out.

I claim—

1. A receptacle rotatably mounted and having a peripheral opening to the interior thereof, a closing member for said opening, means for securing said closing member in place, and a work holder member removably secured to said receptacle and adapted to serve as a vehicle for removal of articles from the receptacle, said work holder member also closing said opening and being supported by the walls thereof.

2. A receptacle rotatably mounted and having a peripheral opening to the interior thereof, a cover for said opening, a work holder supported by the walls of said opening and removably attached to the receptacle by said cover, said work holder also closing said opening and an attaching fixture supported by said work holder.

3. A receptacle rotatably mounted and having a peripheral opening to the interior thereof, a dished member to close said opening and supported by the walls of the opening, means for retaining said member in place, and a work attaching member removably secured to and carried by said closing member.

4. A receptacle movably mounted and having an opening to the interior thereof, a dished shaped work holder fitting and closing said opening, a resilient member located in the recess in the outer face of said work holder, means pressing against said resilient member to retain the holder in place, and an attaching member for work supported by said closing member.

5. A receptacle movably mounted and having an opening to the interior thereof, a dished shaped work holder fitting and closing said opening, a spring secured in the recess in outer surface of said holder and shaped to form a handle, means resting against said spring to retain the holder in place, and an attaching member for work supported by said closing member.

6. A receptacle rotatably mounted and having a peripheral opening to the interior thereof, a work holder closing said opening, supported by the walls thereof and provided with means for the rigid support of work thereon, a cover plate removably attached to the receptacle to retain said holder in place, and means carried by and movable with said receptacle for securing said cover plate.

7. A receptacle rotatably mounted and having a peripheral opening to the interior thereof, a work holder fitting and closing said opening, being supported by the walls thereof and having means to rigidly support work thereon, a cover plate pivotally attached to the receptacle to overlie said opening and retain said work holder in place, and means carried by and movable with said receptacle for securing said cover plate in position.

8. A receptacle movably mounted and having an opening to the interior thereof, said opening having a beveled edge, a work holder having a beveled edge to fit the bev-

eled edge of the opening and close said opening, a cover plate removably attached to the receptacle to retain said work holder in place, and a clamp for retaining said cover plate in position.

9. A receptacle movably mounted and having an opening to the interior thereof, an interchangeable work holder supported by the edge of said opening and a movably mounted closing member for closing said opening and retaining the said work holder in place by engagement with a resilient member thereof.

GEORGE E. ABBOTT.