Oct. 29, 1929. O. HABER 1,733,192

JEWELRY AND WATCH LAUNDRY MACHINE

Filed April 25, 1928

Fig. 1

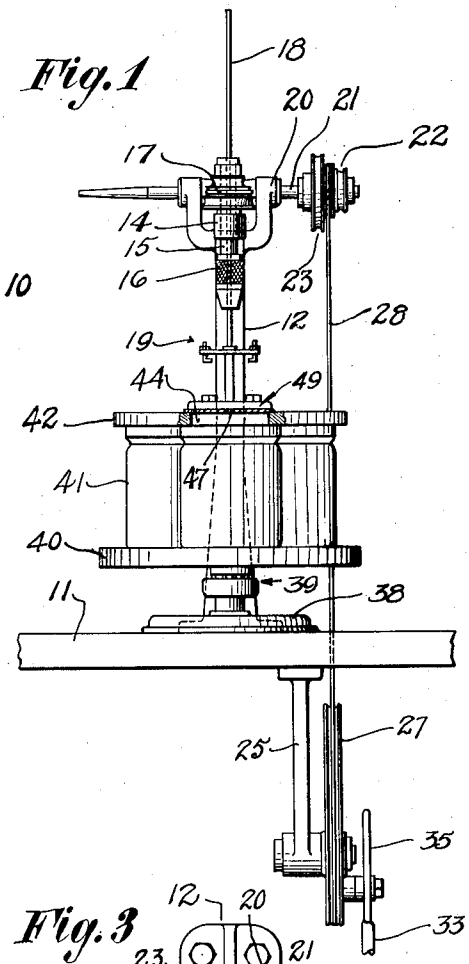


Fig. 3

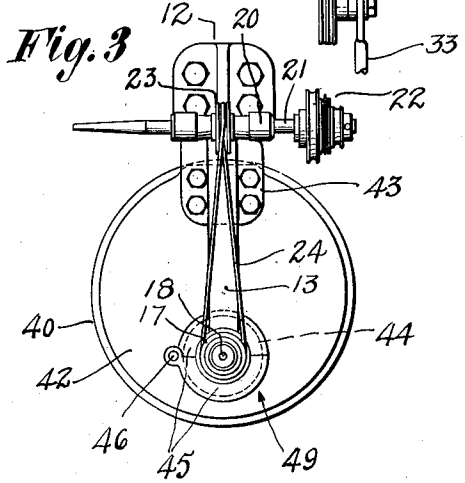
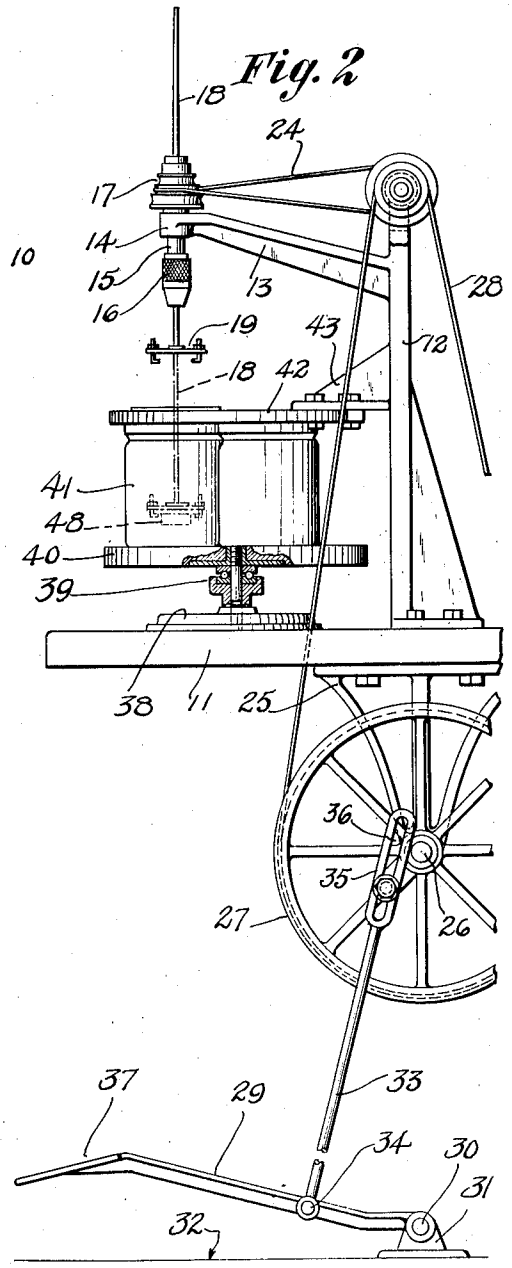


Fig. 2



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UNITED STATES PATENT OFFICE

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JEWELRY AND WATCH LAUNDRY MACHINE

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This invention relates to watch and jewelry cleaning devices.

One object of this invention is to provide a device of the character described having improved means for cleaning a watch or other article in one or more baths of liquid.

Another object of the invention is the provision of an improved device of the nature set forth having a clamp for holding the article to be cleaned, and means for rotating the clamp in the liquid, which means is so related as to insure against ignition of the liquid.

A further object of the invention is to produce a device of the type specified, in which a plurality of cleansing liquids are employed into which the article of jewelry, or the like, is successively submerged, the several liquids being in separate vessels positioned on a table which is rotatable to bring each vessel in turn into proximity to the clamp for immersion of the article.

Still another object of the invention is to furnish a device of the species mentioned having improved means to prevent the liquid from splashing out of its vessel while an article of jewelry is being cleaned therein.

Still a further object of the invention is the production of a device of the kind alluded to which comprises few and simple parts, is inexpensive to manufacture, and nevertheless reliable and efficient in use to a high degree.

Other objects and advantages of the invention will become apparent as the specification proceeds.

With the aforesaid objects in view, the invention consists in the novel combinations and arrangements of parts hereinafter described in their preferred embodiments, pointed out in the subjoined claims, and illustrated on the annexed drawing, wherein like parts are designated by the same reference characters throughout the several views.

Figure 1 is a front elevation showing an embodiment of the invention.

Fig. 2 is a side elevation of the same.

Fig. 3 is a top plan view of the machine.

The advantages of the invention as here outlined are best realized when all of its features and instrumentalities are combined in one and the same structure, but, useful devices may be produced embodying less than the whole.

It will be obvious to those skilled in the art to which the invention appertains, that the same may be incorporated in several different constructions. The accompanying drawing, therefore, is submitted merely as showing the preferred exemplification of the invention.

Generally described, the invention provides a watch and jewelry cleaning device comprising a plurality of jars or vessels each of which contains a different chemical, so as to properly clean any article that is immersed successively in the liquid in the jars. The article of jewelry is attached to a clamp which is rotatable at high speed by any suitable mechanism. The latter is preferably of such nature as to be free of sparks which might ignite the liquid employed. For this purpose the actuating mechanism is either manually operated or else by a motor that is distant from the clamp. The said jars are positioned on a table and have a common cover in which is provided an opening in alinement with the clamp and in registry with the opening in one of said jars. The said table may be turned about a vertical axis to bring the jars successively into registry with the opening referred to so that the article to be cleaned can be projected into the liquid.

Referring in detail to the drawing, 10 denotes a device embodying the invention. The same is seen to comprise a main table 11 upon which is secured a bracket 12 having a laterally extending arm 13. In the end 14 of said arm is formed a hub within which is journaled a hollow shaft 15 having at its lower end a releasable chuck 16. To the upper end of the hollow shaft is secured a stepped pulley 17 which is likewise hollow. Extending vertically through the chuck and hollow shaft is a rod 18 whose upper end projects considerably above the pulley. To the lower end of said rod is fixed a clamp 19. This clamp may be of any suitable shape or construction for the purpose of engaging any article to be cleaned, as for example, a watch. The chuck 16 engages the said rod to maintain the same at any desired elevation and also

turns the rod so as to cause the article engaged by the clamp to be rotated at high speed.

The upper end of the bracket 12 terminates in a forked bearing 20 in which is journaled a horizontal shaft 21. This shaft carries a stepped pulley 22 and adjacent thereto a pulley 23 which is engageable with the pulley 17 by means of a crossed belt 24. Beneath the support 11 is secured a downward projecting bracket 25 in which is journaled a shaft 26 carrying a pulley 27. The latter is operatively engaged with the stepped pulley 22 by a belt 28 that extends through the support 11. To drive pulley 27 a treadle 29 is pivotally mounted at 30 on a bracket 31 that may be secured to the floor 32.

A connecting rod 33 pivotally engages at one end 34 the treadle 29 and at its other end 35 the pulley 27. The connection last referred to may include a slot 36 for adjustable mounting of the machine. Any suitable device such, for example, as a spring (not shown) may be employed to raise the treadle 29 so as to move the operating mechanism out of dead center position. It will now be clear that on pressing the pedal 37, the drive will rotate the clamp 19 about its vertical axis so as to thoroughly wash any article that may be carried thereby in the proper liquid.

Positioned on the support 11 is a base member 38 provided with a bearing 39 to rotatably carry a table 40. On the said table are placed a plurality of containers or vessels 41, each of which contains a different chemical, it being understood that a watch or the like in order to be thoroughly cleaned according to the practice of the trade, must be washed in each of the said chemicals. The said vessels are open at the top and each, on rotation of the table 40, is adapted to successively aline with the rod 18 for the reception of the clamp 19 and the article carried thereby.

A common flat cover or work table 42 is provided for the vessels, which cover is supported by an arm 43 of the bracket 12, the said cover having an opening 44. A closure means for the opening 44 is positioned on the cover 42 which closure means is effective after an article has been immersed into the liquid and is being rotated therein. The said closure means may comprise a pair of half discs 45 both pivoted at 46 and coacting in the closed position to provide an opening 47 for the reception of the rod 18.

The operation of the device will now be clearly apparent. An article to be cleaned is secured in the clamp 19 and the chuck 16 loosened to permit the rod 18 to be moved downwardly until the article is thoroughly immersed in the liquid. Thereafter the said chuck is tightened, retaining the rod in the fixed position of elevation and operatively engaging the same for rotation. The operator then closes the cover 49 and manipulates the treadle to rotate the article 48 at high speed within the liquid. After this has occurred for a predetermined time, the drive is stopped, the closure means 49 opened, and the chuck 16 loosened to permit the rod 18 to be elevated, raising the article out of the liquid. Next the table 40 is turned to bring the vessel having the next proper liquid into registry with the opening 44 and the process is repeated.

It will thus be seen that I have provided a device which fulfills the several objects of the invention and is well adapted to meet the requirements of practical use.

I claim:

1. A device of the character described, including a plurality of vessels adapted to contain cleansing liquids of different natures, an article holding clamp, a chuck for releasably holding the clamp whereby the clamp may be moved into or out of one of said vessels, means to rotate the chuck while the clamp is in the vessel, and a member supporting said vessels, said member being rotatable to permit the vessels to successively receive the clamp.

2. A device of the character described, including an article holding clamp, a vertical rod supporting said clamp, a plurality of vessels disposed side by side, said vessels having top openings, and being adapted to contain different liquids, a table supporting said vessels, said table being rotatable about a vertical axis to bring the vessels successively into alinement with said rod, a cover for the vessels, said cover having an opening to aline with said rod, means to engage said rod, said means including a hollow shaft through which the rod extends and along which it is slidable, a pulley on the hollow shaft, and means to drive the pulley.

3. A device of the character described, including an article holding clamp, a vertical rod supporting said clamp, a plurality of vessels disposed side by side, said vessels having top openings, and being adapted to contain different liquids, a table supporting said vessels, said table being rotatable about a vertical axis to bring the vessels successively into alinement with said rod, a cover for the vessels, said cover having an opening to aline with said rod, means to slidably engage said rod to permit the rod to be moved downward and the clamp lowered into an alined vessel, a pulley, said means also engaging the pulley, and a drive for the pulley.

4. A device of the character described, including an article holding clamp, the latter having an upward extending stem, a chuck to engage the stem, a vertical shaft to turn the chuck, said stem being movable lengthwise of the chuck to lower the clamp, a drive to rotate the shaft, a plurality of vessels to contain different liquids to receive the clamp, and a member supporting said vessels and

rotatable about a vertical axis to bring the vessels successively into alinement with said chuck.

5. A device of the character described, including an article holding clamp, means to rotate the same about a vertical axis, a plurality of vessels adapted to contain different liquids, a member supporting said vessels and rotatable about a vertical axis to bring the vessels successively into alinement with the clamp, said clamp being vertically movable to be lowered into one of said vessels, and a flat cover engaging the vessels at the openings thereof to close all the vessels simultaneously, said cover having an opening through which the clamp rotating means extends, said cover having auxiliary means to open or close said opening, said cover forming at the top thereof a working surface to facilitate the engagement of an article with said clamp.

In testimony whereof I affix my signature.

OSCAR HABER.