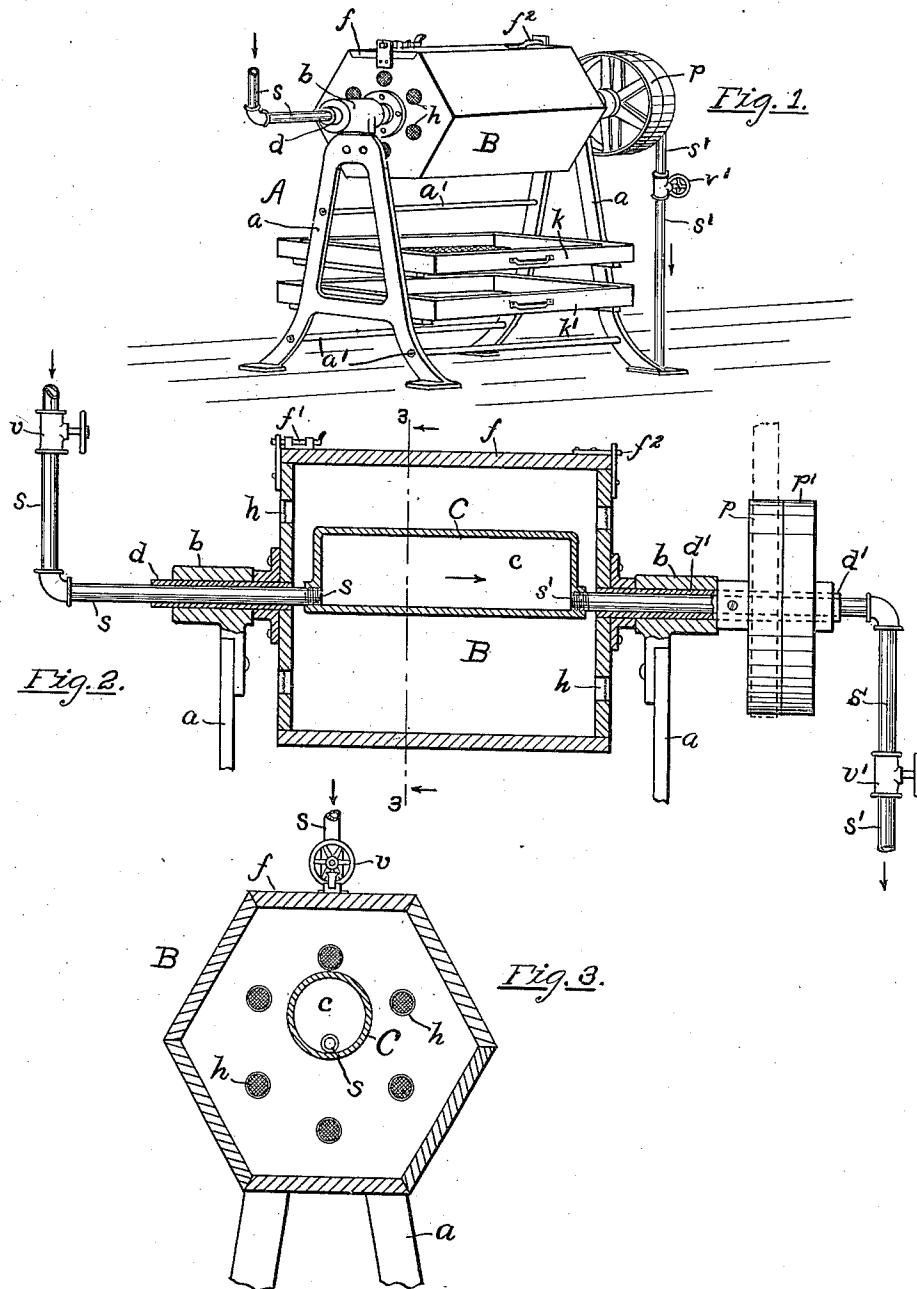


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MACHINE FOR DRYING AND POLISHING ARTICLES OF JEWELRY, &c.
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1,093,078.

Patented Apr. 14, 1914.



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HENRY B. RICHARDSON, OF ATTLEBORO, MASSACHUSETTS.

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Specification of Letters Patent.

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Application filed September 3, 1912. Serial No. 718,201.

To all whom it may concern:

Be it known that I, HENRY B. RICHARDSON, a citizen of the United States, residing at Attleboro, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in Machines for Drying and Polishing Articles of Jewelry, &c., of which the following is a specification.

My present invention relates to machines or apparatus for drying and polishing articles of jewelry, &c., and it consists in the construction and arrangements of parts, all as hereinafter set forth and claimed.

The object of the invention is to produce mechanically actuated means for drying and polishing articles of jewelry in a more efficient, thorough and rapid manner, and at a reduced cost, as compared with fixed sawdust-carrying tanks usually employed for drying jewelry.

In the accompanying sheet of drawings, Figure 1 is a perspective view of my improved combined drying and polishing machine complete; Fig. 2 is a longitudinal sectional view, in enlarged scale, taken through the center of the barrel or drum; and Fig. 3 is a transverse sectional view taken on line 3—3 of Fig. 2.

The following is a detailed description of the invention, including the manner of its operation and use:

The machine or apparatus as a whole is indicated by A. It is provided with oppositely arranged vertical end frames *a*, *a*, and horizontal connecting ties or rods *a*¹. To the frame members are secured alining bearings *b*, *b*, adapted to receive the tubular journals or trunnions *d*, *d*¹ secured to the respective ends of the polygonal-shaped revoluble drum or barrel B, the latter having one of its sides, as *f*, removable; means, consisting of a movable bolt *f*¹ and bar *f*² serving, in connection with the cover *f*, to maintain the drum in a normally closed and locked condition.

A stationary hollow heater member C is positioned in the drum, the former having a steam inlet pipe *s* tapped into one end, and an exhaust-pipe *s*¹ tapped into the other end. The heater C is of tubular form, being eccentrically positioned with respect to the drum B and the bearings *b*, *b*, with the major portion of the heater lying above the longitudinal axis of the drum. The pipe *s* passes outwardly through the trunnion *d*

and is adapted to connect with a suitable steam supply; a valve *v* being employed for obvious purposes. The exhaust and water of condensation flows or is discharged from the heating chamber *c* via pipe *s*¹, mounted in trunnion *d*¹, a valve *v*¹ interposed in the pipe being employed to control the outflow from the heater.

The drum B is adapted to be rotated bodily by means of a belt-driven pulley *p* secured to an extension of the corresponding trunnion *d*¹; when not in use the belt may be shifted onto the idle pulley *p*¹.

The frame is adapted to slidably support a pair of horizontal shallow pans or trays *k*, *k*¹ normally positioned below the drum and adapted to readily receive therefrom its charge or loose contents. The upper tray *k*, contiguous to the lower side of the drum, is provided with a screen-covered bottom of comparatively fine mesh, thereby adapting it to be used as a sieve. The other or lower tray *k*¹ receives the absorbent siftings, as for example, dry sawdust, as it falls from the sieve.

Now, assuming the drum B to be temporarily stationary, the cover *f* removed, and the drum charged with a quantity of loose, dry sawdust or other equivalent absorbent substance in a finely divided state, the operator next places within the drum's interior a quantity of wet or moist articles of jewelry, as removed from the cleansing bath, followed by replacing and securing the cover *f* to close the drum, and starts the machine. Meanwhile steam may be circulating through the heater, if desired. A few turns of the drum suffices for the dry sawdust to thoroughly absorb all moisture from the surfaces of the articles, the movement of the drum also serving at the same time to agitate its loose contents to remove any stains or discolorations, thus leaving the articles in a perfectly dry, unspotted and polished condition. The screen-covered holes *h* in the drum's ends permit a circulation of air therethrough and also the escape of vapor. Upon stopping the machine, the cover *f* is removed and the drum partly turned, its entire loose contents then falling directly into the open, flat sieve *k* beneath. The act of shaking the sieve quickly sifts or separates the sawdust from the jewelry into the lower pan *k*¹, the metal articles being retained in the sieve. The sawdust may now be returned into the drum, and the process above de-

scribed repeated continuously in connection with each batch or charge of jewelry.

I claim:

1. In a machine for drying and polishing
5 articles of jewelry, the combination with a
revolubly mounted drum having its ends
provided with annular central journals
alining with each other, and a closable
charging opening formed in the drum's wall,
10 of a stationary hollow heater mounted with-
in the drum, and inlet and outlet pipes fixed
to the heater extending outward from the
latter through the respective annular jour-
nals for conducting steam into and from the
15 heater.

2. A machine of the general character de-
scribed, comprising in combination a sta-
tionary frame or housing provided with a
pair of longitudinally separated alining
20 bearings, a vented polygonal-shaped hollow
drum adapted to loosely contain a moisture-
absorbent substance, as dry sawdust, said
drum having a normally closed charging
opening formed in its side wall, annular
25 trunnions fixed to and extending outward
from the ends of the drum mounted in said
bearings, means for revolving the drum, a
non-revoluble hollow member adapted to
form a heater positioned within the drum,
30 and steam inlet and outlet pipes connecting

with the heater's interior passing centrally
through said trunnions.

3. In a jewelry drying machine of the
general character described, having a rev-
olubly mounted drying drum provided with 35
a normally closed charging opening formed
in its wall and outwardly extending central
annular end trunnions, the combination
therewith of a non-revoluble chambered
member positioned within the drum, and 40
controlled means for supplying said member
with a heating medium.

4. A device of the class described com-
prising end frames having openings posi-
tioned therethrough, a polygonal-shaped 45
drum, tubular trunnions extending from op-
posite ends of said drum and journaled in
said openings, a power pulley upon the pro-
jecting end of one of said trunnions, and an
eccentrically mounted stationary tubular 50
heater positioned within said drum and with
its major portion lying above the longitudi-
nal axis of the latter.

In testimony whereof I have affixed my
signature in presence of two witnesses.

HENRY B. RICHARDSON.

Witnesses:

GEO. H. REMINGTON,
CALVIN H. BROWN.