C. S. BAYNTON.

APPARATUS FOR WASHING PHOTOGRAPHIC PRINTS, FILMS, AND SUCH LIKE.

APPLICATION FILED OCT. 23, 1913.

1,124,196.

Patented Jan. 5, 1915.

2 SHEETS—SHEET 1.

Fig. 1.

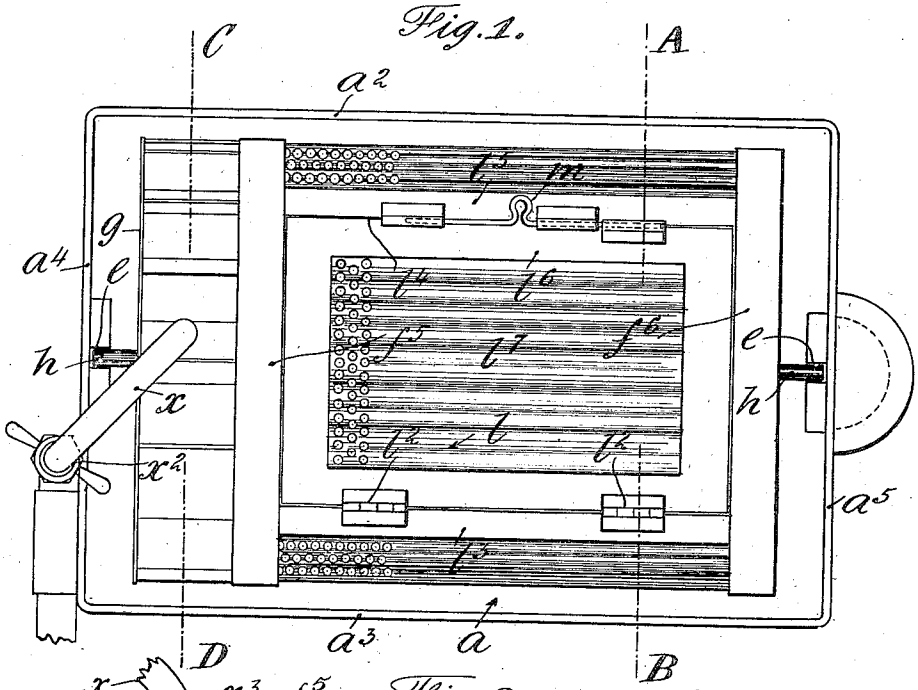
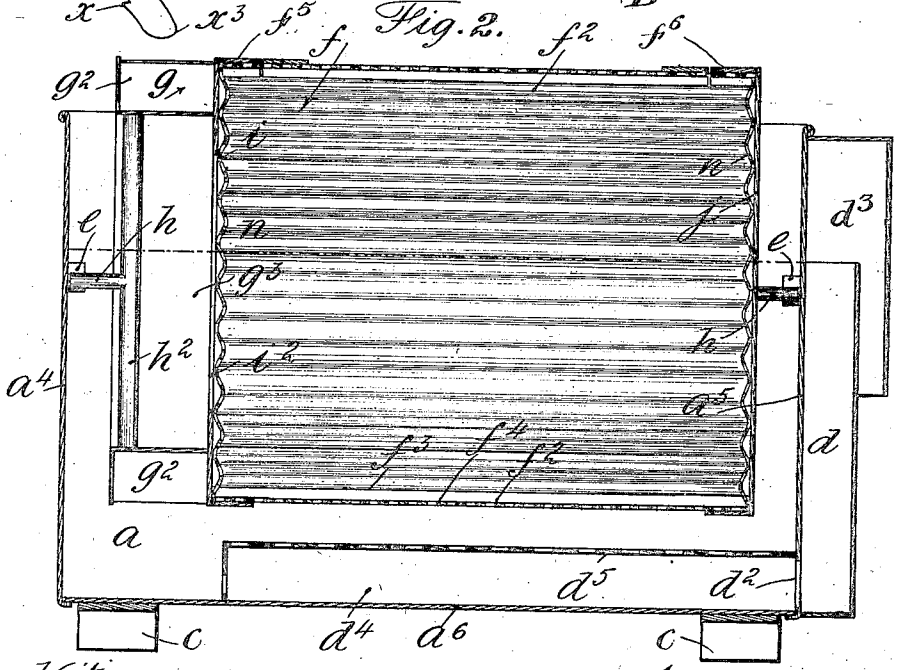


Fig. 2.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 3.

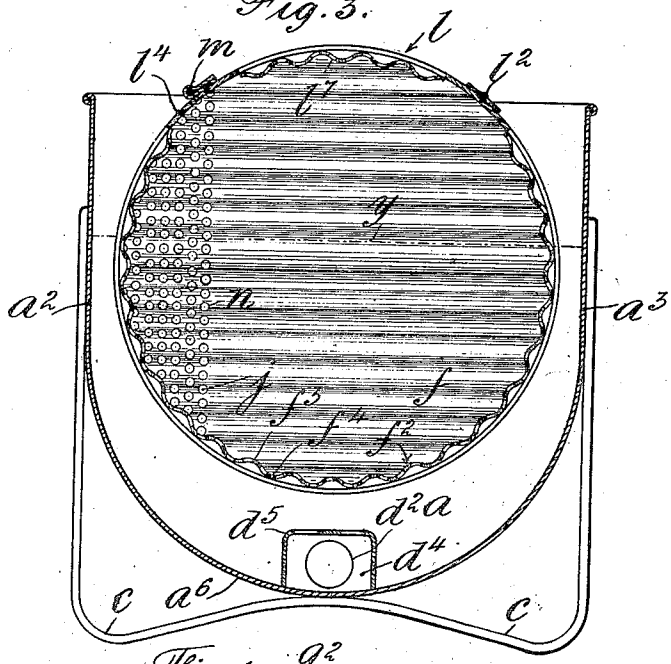
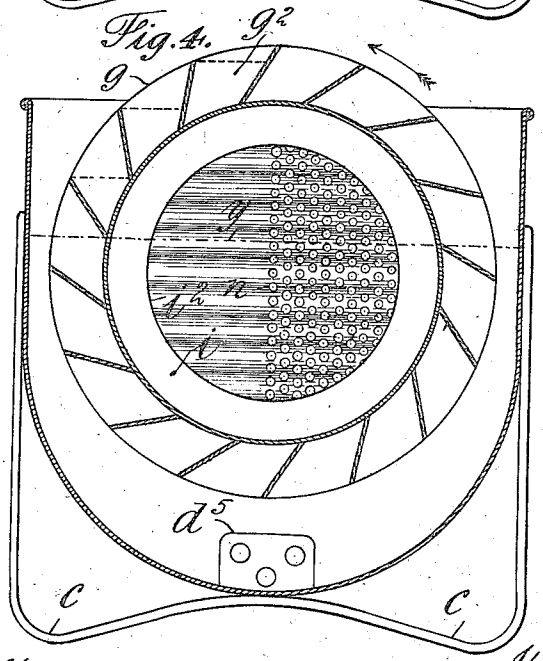


Fig. 4.



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APPARATUS FOR WASHING PHOTOGRAPHIC PRINTS, FILMS, AND SUCH LIKE.

1,124,196. Specification of Letters Patent. Patented Jan. 5, 1915.

Application filed October 23, 1913. Serial No. 796,923.

To all whom it may concern:

Be it known that I, CHARLES SUMMERS BAYNTON, subject of the King of Great Britain, residing at Exchange Buildings, New street, Birmingham, England, have invented certain new and useful Improvements in Apparatus for Washing Photographic Prints, Films, and such like, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to photographic print, film, or like washer of the perforated drum kind revolving within a tank holding washing liquid, and provides the hereinafter described and claimed combination of parts having for their primary object the prevention of the prints, films, or the like sticking or becoming attached to the interior of the drum or to each other.

The perforated drum is formed with corrugations so arranged that the prints can only touch the tops of the corrugations, and the washing liquid can travel along the depression between the said corrugations to prevent the prints from resting on the said tops. One end of the perforated drum outside the corrugations is closed by an imperforate plate, and the opposite end, which is also provided with a perforated corrugated plate, is only partially closed, while at this same end the perforated drum is provided with a water wheel having an open middle part. The perforated drum revolves in the liquid container only partially submerged. A supply of washing liquid, firstly, fills the pockets of the water wheel above the water level to slowly revolve the drum, and then overflows into the liquid container at the partially open end of the drum.

The features aforesaid and hereinafter clearly stated in the claims are shown by the accompanying drawings using the water from an ordinary pressure water tap.

Figure 1 is a plan of the apparatus. Fig. 2 is a longitudinal vertical section. Fig. 3 is a transverse section on the dotted lines A B, Fig. 1, looking to the right. Fig. 4 is a transverse section on the dotted lines C D, Fig. 1, also looking to the right.

a is a metal tank comprising sides a^2 a^3 ends a^4 a^5 and bottom a^6, the latter being semicircular cross sectionally as shown. This tank is mounted upon feet c, and is provided with an outside overflow for the washing liquid in the form of a vertical passage d, which communicates with the bottom of the tank only by the opening d^2, the liquid overflowing at the upper end d^3, so that the height of said upper end decides the height of the constantly changing washing liquid within the tank. The opening d^2 is an outlet from a portion d^4 of the bottom of the tank inclosed by a freely perforated covering d^5.

e e are upwardly-opening bearing pieces oppositely provided internally of the tank at the ends to support the combined revoluble container and water wheel, hereinafter particularly described.

f is the print containing drum, and g is the water wheel arrangement permanently secured to one end of said container, and h h are the end trunnions for this revoluble element, *i. e.*, the combined drum and wheel to revolve within the bearing pieces e e, the revoluble element simply dropping into position within the tank, and, therefore, being easily removable for putting in and taking out the prints. The print container f is formed by a freely perforated shell f^2 which is longitudinally corrugated from end to end thereof, as clearly shown in Fig. 3, wherein f^3 indicates the corrugations proper and f^4 the depressions therebetween. said shell at and near the ends i and j of the container being rigidly attached to metal bands f^5, f^6, carried by said ends to make effective attachment of the shell to the ends. A door l forms part of the shell and is hinged at l^2 to a bar l^3 extending between the bands f^5 f^6, the opening edge l^4 of this door fastening to a bar l^5 very simi-

lar in construction and application to the bar l^3. The door has a frame l^6 paneled at l^7 with freely perforated metal having corrugations of the same kind as the greater part of the shell, so that when the door is closed the interior surface of the shell is almost wholly of perforated corrugated metal, or other suitable material. m is the fastening between the opening edge l^4 of the door frame and the bar l^5. That end i of the container to which the water wheel g is applied is formed at the center with an opening i^2, while the end j is imperforate or closed. Each end is lined with a perforated disk n of metal or other suitable material provided with corrugations similar to those on the shell f^2, the corrugations across said ends being parallel with each other, although they may be in ring formations on said disks, which are always fixed parts of the print container and revolve at all times therewith.

The water wheel g, the pockets of which are shown at g^2, is of an open construction inward of said pockets for the full area of the opening i^2, as shown at g^3, the washing liquid in the action of the apparatus circulating freely through this open metal part of the water wheel and through the opening i^2 into the container, the trunnion h at this end of the revoluble part of the apparatus being rigidly carried by a bar h^2 extending from the bottoms of the pockets g^2, diametrically across the open metal part g^3.

The pockets g^2 of the water wheel are formed so as not to pick up any water on one side, and so that two or three of them combine with the water they contain to effect the rotation of the container, such pockets being operative above the washing liquid level, which is indicated by the dotted lines y Figs. 3 and 4.

x indicates an adjusted nozzle carried by the tank and fed from a pressure water tap or other supply, same being provided with a union connection, at x^2, so that the correct position of its outlet end x^3 can be determined to fill the requisite pockets on one side of the center to cause a continuous and steady revolution of the print container within the tank, the gradual filling of the pockets with water combining with the resistance to the too-free rotation due to the partial submersion of the revoluble part of the apparatus within the tank, and the construction of said revoluble part as an even load, to effect this.

The interior surface of the container f must be smooth throughout to prevent any of the prints tearing.

When the apparatus is in operation, water overflows the pockets of the water wheel and circulates centrally through the open end i of the container and travels to the closed, other end of said container, and is by said end returned to flow in the opposite direction.

By arranging the corrugations longitudinally of the walls of the container, the revolution of the latter will cause the sides of the corrugations to exert a beating action on the water which forces the same to pass through the perforations and thus dislodge any prints that might have become momentarily attached to the container walls.

Having now described my invention, what I claim and desire to secure by Letters Patent is:—

1. In a washing apparatus, the combination of a liquid container, a drum supported to revolve within said container and made of freely perforated, corrugated metal with the corrugations of the cylindrical wall arranged longitudinally of the drum, and means for revolving the drum in said container, substantially as described.

2. In a washing apparatus, the combination of a liquid container; a drum supported to revolve within said container and constructed of perforated, corrugated metal, one end of said drum being closed, and the other end thereof provided with an opening; a water wheel connected to the second-named end of said drum; and means for supplying washing liquid to said water wheel, to revolve said drum and afterward overflow into the container.

3. In a washing apparatus, the combination of a liquid container; a drum supported to revolve within said container and constructed of perforated, corrugated metal; a water wheel connected to one end of said drum; and means for supplying liquid to said water wheel, to revolve said drum.

4. In a washing apparatus, the combination of a liquid container; a drum supported to revolve within said container and only partially submerged therein, said drum being constructed of freely-perforated, corrugated metal, with the corrugations of the cylindrical wall arranged longitudinally of the drum, one end of said drum being closed, and the other end thereof provided with an opening; a water wheel connected to the second-named end of said drum; and means for supplying washing liquid to said water wheel, to revolve said drum and afterward overflow into the container.

5. In a washing apparatus, the combination of a liquid container; a drum supported to revolve within said container and constructed of perforated, corrugated metal, with the corrugations of the cylindrical wall arranged longitudinally of the drum; a water wheel connected to one end of said drum; and means for supplying liquid to said water wheel, to revolve said drum.

6. In a washing apparatus, the combina-

tion of a liquid container; a drum supported to revolve within said container and constructed of perforated, corrugated metal, one end of said drum being closed externally of the corrugations, and the other end thereof provided with an opening; a water wheel connected to the second-named end of said drum; upwardly-opening bearing pieces arranged internally of said container at opposite points, to support said drum; and means for directing a supply of liquid against said water wheel, to revolve said drum.

In testimony whereof I affix my signature in the presence of two witnesses.

CHARLES SUMMERS BAYNTON.

Witnesses:
A. W. FUENS,
MARGARET RIPPINGHAM.