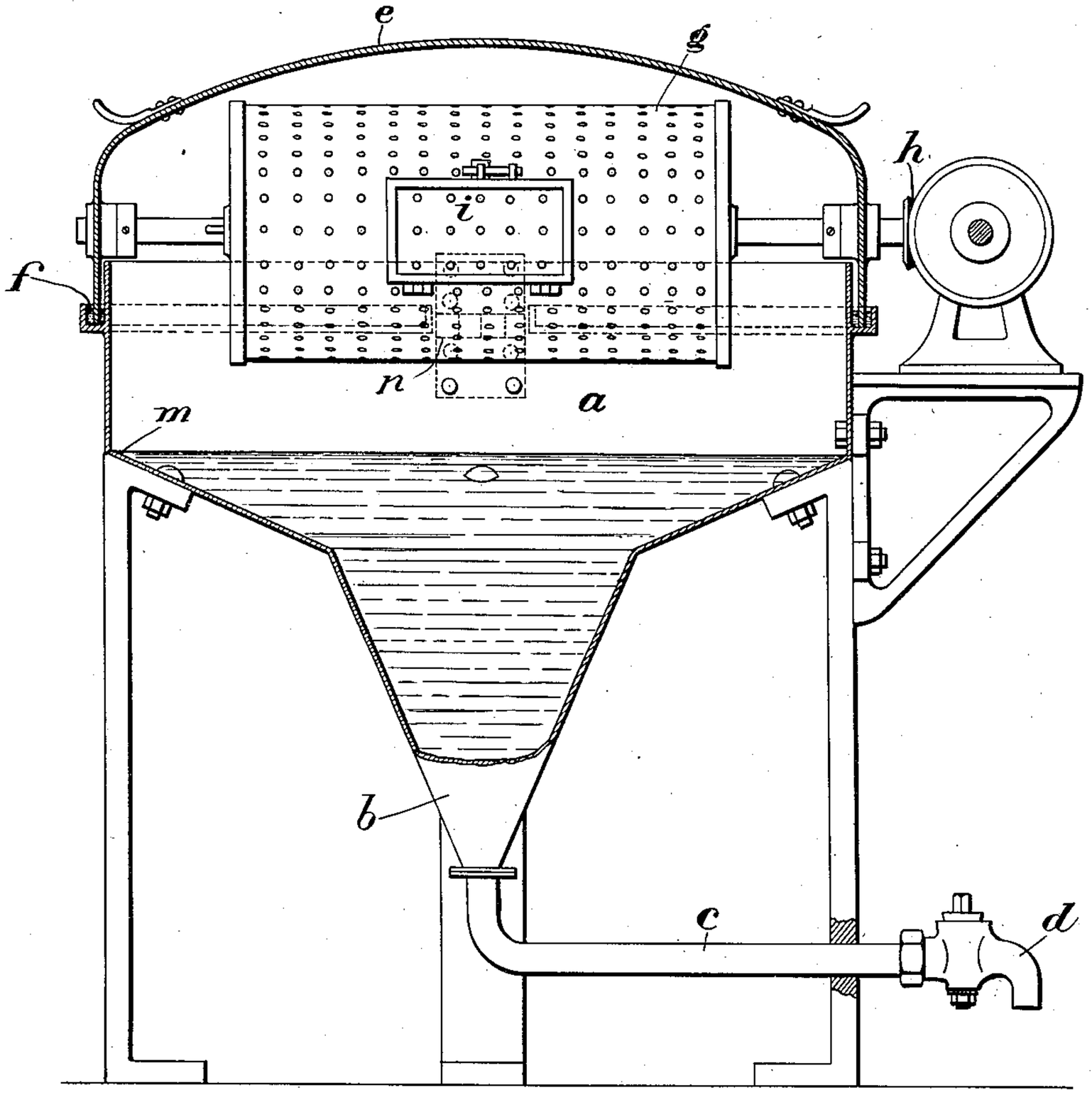
H. RESCH.

APPARATUS FOR CHEMICAL CLEANING.

APPLICATION FILED AUG. 17, 1909.

**959,883.** **Patented May 31, 1910.**

FIG_1_



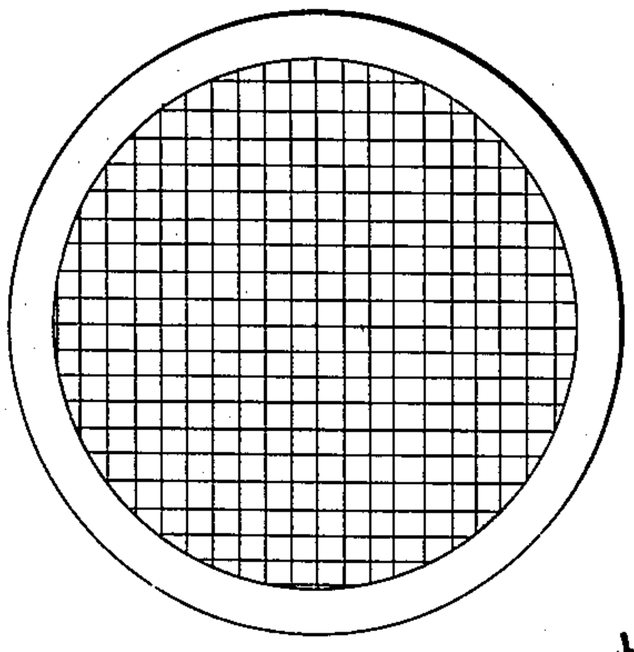



FIG_2_

WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## APPARATUS FOR CHEMICAL CLEANING.

959,883. Specification of Letters Patent. Patented May 31, 1910.

Application filed August 17, 1909. Serial No. 513,273.

*To all whom it may concern:*

Be it known that I, HERMANN RESCH, a subject of the Grand Duke of Baden, residing in Lörrach, Grand Duchy of Baden, Germany, have invented new and useful Improvements in Apparatus for Use in Chemical Cleaning, of which the following is a full, clear, and exact specification.

In the process of chemical cleaning or washing, the clothes or articles to be washed are usually rinsed in a benzin bath, in order to thoroughly cleanse them. Hitherto, this rinsing was not possible without considerable waste of benzin, and the main object of this invention is to provide apparatus in which the rinsing is so carried out, that as large a proportion as possible of the benzin can be recovered and reused.

According to this invention, the apparatus comprises a container or receptacle designed for the reception of the benzin, the said receptacle being provided with a tightly-fitting cover and, at its lower part, with a clarifying funnel, or cone, having a discharge pipe, the said funnel serving to collect the impurities which have been dissolved from the clothes, or the like, on their passage through the benzin bath, and which impurities settle in the funnel and leave the supernatant liquor clear. Mounted in the afore-mentioned cover, is a rotary drum into which the articles are introduced in order that they may be revolved and drained by centrifugal action when the cover is closed, the whole combination having for its object to recover and clarify the used benzin as far as possible, in order that it may be again used, so that only the small quantity of benzin, which is drawn off from the discharge pipe with the impurities from the funnel, is lost and which small portion can, if desired, be filtered. The apparatus, therefore, renders it possible to recover the benzin used in the operation both quantitatively and qualitatively, which is of considerable advantage having regard to the relatively high price of benzin. Moreover, the apparatus is practically no more complicated and costly than rinsing apparatus of this class as hitherto made.

In the accompanying drawing, Figure 1 is a sectional elevation of apparatus made according to the invention, and Fig. 2 is a view illustrating a modification.

The container *a* for the reception of the benzin through which the articles to be rinsed are drawn, is formed at its lower part with a clarifying funnel, or cone, *b*, to the lower end of which there is fitted a discharge pipe *c* having a cock *d*. At the top of the container *a* there is arranged the cover *e* which is articulated at *n* to the wall of the container and, when put down in place, is closed by a hydraulic joint *f*. This cover *e* has lateral bearings for the shaft of a rotary drum, *g*, of ordinary construction, which is arranged inside the cover, and which may be rapidly rotated around its axis, for example, by means of the bevel gear *h*. The cover *e* when it is lifted about its hinge *n* carries with it the drum *g* so that the goods to be treated can easily be introduced into or withdrawn from the cleaning bath. For its easy manipulation, lugs or handles are provided at the top of the cover *e*. Doors *i*, on the drum *g*, permit the articles to be introduced into the latter when the cover *e* is in open position.

The apparatus is employed in the following way: When the cover is opened, the articles to be washed are drawn through the benzin bath in the lower part of the container *a* including the funnel *b*. The articles, which are thereby saturated with benzin, are then introduced into the centrifugal drum *g*, the doors *i* being brought into convenient position, if necessary, by an angular adjustment of the drum, the cover *e* is closed down whereby the gear *h* is engaged again, and the goods in the drum are now revolved, and drained by centrifugal action by rapidly rotating the drum *g*. The benzin which is driven off collects in the container, while the impurities, which were dissolved from the articles during their passage through the bath, separate out and collect in the lower part of the funnel *b*. The benzin employed, therefore, is quantitatively recovered and, at the same time, clarified. To render the apparatus ready for being used again for rinsing purposes, it is merely necessary to open the cock *d* to permit of the discharge of the small quantity of the benzin with the impurities, the said discharged benzin being, if desired, rendered again fit for use by filtration or in any other way.

In some cases, it is advantageous to employ for the drying operation a sieve which is arranged in the container *a* above the benzin bath at the point marked *m* Fig. 1.

Such a sieve is shown to a smaller scale in Fig. 2 of the drawing.

In the accompanying claims, where I use the word "funnel," in each instance, I desire to be understood as referring not only to a funnel, of any suitable construction, but to a cone when used for the like purpose.

What I claim is:

1. In an apparatus for rinsing articles, a container for benzin, and provided, at its lower part, with a clarifying funnel having a discharge opening for separation of impurities removed from articles drawn through the benzin, a movable cover for tightly closing said container and a centrifugal drum rotatably mounted in said cover, for reception of articles aforesaid and for draining benzin therefrom by centrifugal action, substantially as and for the purposes hereinbefore described.

2. In an apparatus for rinsing articles, a container for benzin, provided at its lower part with a clarifying funnel having a discharge opening for separation of impurities removed from articles drawn through the benzin, said funnel having a discharge pipe provided with a cock, a movable cover for tightly closing said container, and a centrifugal drum rotatably mounted in said cover, for reception of articles aforesaid and for draining benzin therefrom by centrifugal action, substantially as and for the purpose hereinbefore described.

In witness whereof I have hereunto signed my name this 3rd day of August 1909, in the presence of two subscribing witnesses.

HERMANN RESCH.

Witnesses:

GEO. GIFFORD,

AMAND BRAUN.