June 5, 1923. 1,457,748

P. W. RAEHSE

BOTTLE STOPPER VARNISHING DEVICE

Filed June 17, 1920

Fig. 1.

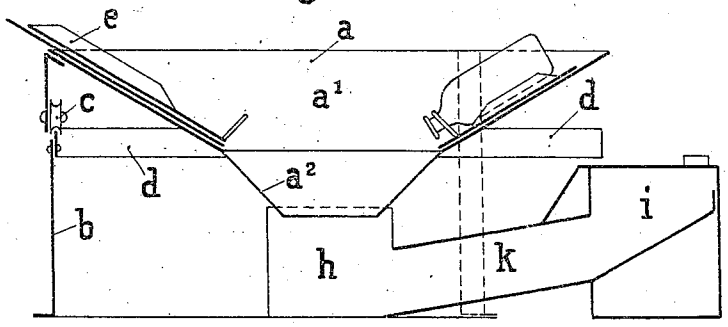
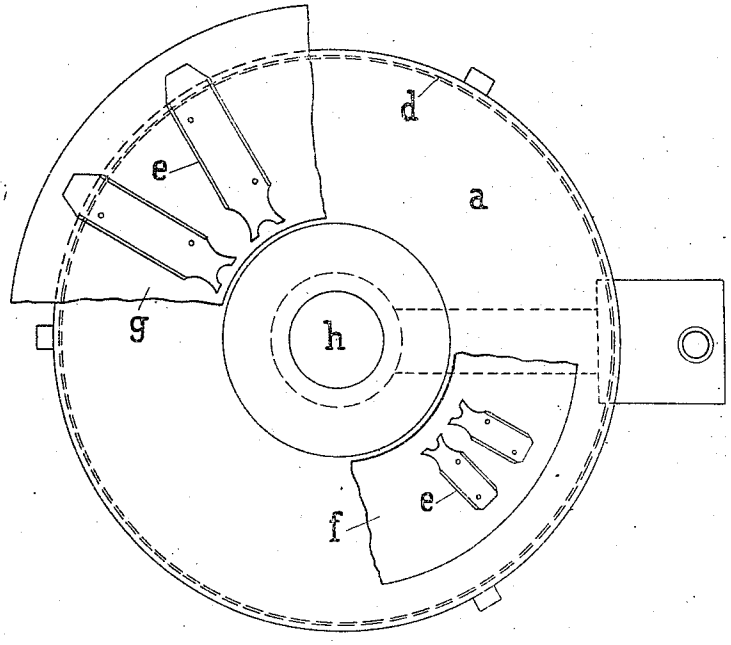


Fig. 2.



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UNITED STATES PATENT OFFICE.

PAUL WILHELM RAEHSE, OF HAMBURG, GERMANY.

BOTTLE-STOPPER-VARNISHING DEVICE.

Application filed June 17, 1920. Serial No. 389,787.

To all whom it may concern:

Be it known that I, PAUL WILHELM RAEHSE, a citizen of Germany, residing at Hamburg, Hafenhaus, Germany, have invented a new and useful Bottle-Stopper-Varnishing Device, of which the following is a specification.

The invention relates to apparatus for covering corked bottles with a varnish which will serve to replace zinc and tin capsules. For this purpose certain solutions of cellulose-nitrates in alcohol or ether or other like fluids are suitable. These fluids have, however, the drawback that the solution rapidly evaporates, so that care must be used to protect them during manipulation as far as possible from contact with air. This requirement is fulfilled in the apparatus according to the invention which comprises a closed fluid container provided with an immersion opening suited to the head of the bottle which is to be coated and a draining frame which for rapid manipulation is made rotatable.

In the accompanying drawings an example of a construction according to the invention is represented. Fig. 1 shows the apparatus in cross section and Fig. 2 is a plan view showing segments of interchangeable alternate bottle holding means upon the device.

The apparatus consists of a fluid container *i* which is connected by a passage *k* with a cup provided with an immersion opening *h*, over which opening a funnel shaped draining frame is arranged. This frame comprises an under frame *b* with a circular platform *d* on which a funnel shaped surface a^1 rotates on rollers *c*; the surface a^1 is extended at the centre to form a draining funnel a^2. On the surface a^1 exchangeable circular rings *f* and *g* are arranged and are provided with holders *e* for the bottles. The holders *e* are adapted to the form of the bottles to be varnished; each holder consists of a trough with a forked projection in which the neck of a bottle is laid. The bottle-holders *e* are of different dimensions, so that different rings *f* or *g* may be placed on the funnel-surfaces *a'*, according to the size of the bottles to be lacquered. The bottles are dipped into the immersion vessel *h*, and then placed in the bottle-holder for the dripping off. See Fig. 1. The rings *f* or *g* may be loosely disposed on the funnel-surfaces *a'*, or may be secured thereto by means of pins or screws. In order to interchange the circular rings *f* and *g* and the bottle holders and for the purpose of easily cleaning these parts and the inner surface of the funnel, the latter can be provided at different places either with recesses through which pass suitable catches, screws or the like arranged on the outer surface of the rings *f* and *g*, and clamped to the outer surface of the funnel, or otherwise suitably secured.

The fluid container consists of a holder *i* which is connected by an inclined passage *k* with the cup containing the immersion opening *h*. It causes a uniform supply of the coating material to pass into the cup from the holder as the fluid is used up by the immersion of the heads of the bottles.

The action is as follows: The container *i* with the immersion cup connected to it and provided with the opening *h* is filled to a certain height with the fluid coating material, so that the heads of the bottles can be uniformly immersed. After a bottle has been dipped it is laid on a holder *e* and the bottle next in order dipped and placed on its holder and the support *a* rotated. The dipped coatings of the heads of the bottles drain slowly during the rotational movement of the carrier *a* and as soon as all the holders have been filled with the bottles, the first bottle which has been placed for draining is already dried and is removed and its place is taken by another bottle which has been dipped, so that there is a continuous removal of the drained and dried bottles which can be taken away for further operations such as labelling and packing. During this process the coating fluid flows from the containing vessel *i* into the immersion cup to make up for the consumption due to the immersion of the bottles.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. Apparatus for lacquering bottle closures, comprising a supporting member, an immersion vessel in the center of the supporting member and open in the upper side, a dripping frame mounted for rotation on the supporting member and having a centrally arranged funnel, said funnel being arranged to discharge into said immersion vessel, and bottle holding means on said dripping frame.

2. Apparatus for lacquering bottle clo-

sures, which consists of an immersion vessel above the entrance opening of which a horizontally rotatable dripping frame for the reception of the immersed bottles is provided, and a ring removably mounted on said frame and having bottle holding means.

3. Apparatus for lacquering bottle enclosures, which consists of an immersion vessel above the entrance opening of which a horizontally rotatable dripping frame for the reception of the immersed bottles is provided, and a circulation ring for the reception of the bottles, said ring being mounted on said frame.

In testimony whereof he affixes his signature in presence of two witnesses.

PAUL WILHELM RAEHSE.

Witnesses:

EMIL HAGAR,

PETER LAUER.