

E. HERRMANN.
STORAGE RECEPTACLE.
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944,435.

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Fig. 1

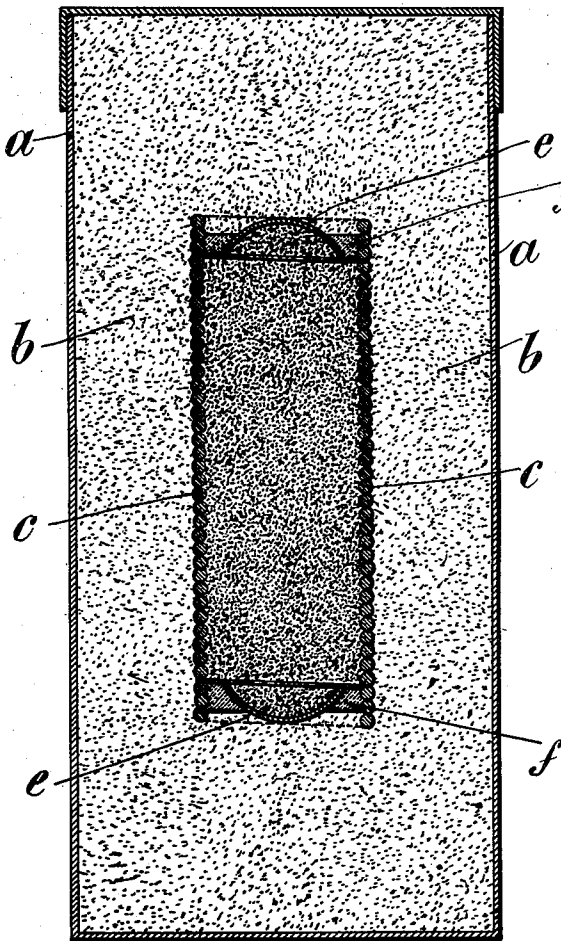
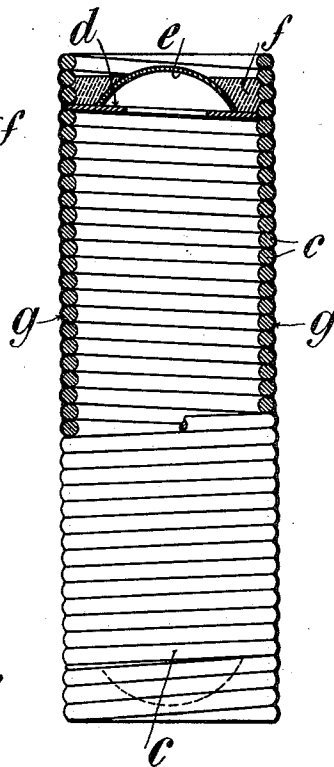


Fig. 2



Witnesses:

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STORAGE-RECEPTACLE.

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To all whom it may concern:

Be it known that I, ERNST HERRMANN, a subject of the Emperor of Germany, residing at Ziegeleistrasse 1946, Uster, Switzerland, have invented certain new and useful Improvements in Storage-Receptacles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in receptacles, more particularly adapted for storing alkaline peroxids in a soapy powder.

The bleaching properties of active oxygen, obtained from alkali peroxids by the action of water, have long been utilized in the textile industries, for instance for bleaching tussah silk and for other purposes. For domestic use the direct employment of alkali peroxids, *e. g.* sodium peroxid, is attended with considerable drawbacks and danger. Without some special packing this product loses its valuable properties; it decomposes under the influence of the moisture and carbonic acid of the air, liberating oxygen; on dissolving in water it may cause explosions, since the peroxid often contains small pieces of non-oxidized alkali metal.

Numerous methods and modes of storing have already been proposed in order to facilitate the use of alkali peroxids for domestic washing purposes and render its employment safe. By none of these methods, however, can the peroxid be uniformly mixed with and dissolved in the water without danger.

The subject of the present invention is a receptacle, by means of which the desired ends can be attained.

The new receptacle consists of a vessel which can be filled with the washing-powder, inclosing a second smaller detached vessel which is surrounded by the powder and contains the alkali peroxid. This alkali peroxid container is specifically heavier than water and is closed by a substance which melts in moderately warm water.

The alkali peroxid container is not connected with the vessel of washing-powder, nor with the latter itself. On the washing-powder vessel being opened, therefore, and

the contents shaken into a copper, or similar wash-vessel, filled with water, the alkali peroxid container will immediately drop out of the mass of washing-powder and sink to the bottom of the copper.

One constructional form of the invention is illustrated in the accompanying drawing, in which—

Figure 1 is a section through the new storage receptacle, and Fig. 2 an elevation, partly in section, of the peroxid container alone, drawn to an enlarged scale.

The can or like vessel *a*, filled with washing-powder *b*, contains a second much smaller vessel *c* for the alkali peroxid, *e. g.* sodium peroxid, this container *c* lying detached in the washing-powder. The wall of the container *c* is formed by a stiff spirally wound wire, whose coils lie tightly against each other, and are thinly coated with tin *g*, so as to constitute an impervious shell. The ends of the container *c* are each closed by a perforated disk *d*, and a cap *e* covering the hole in the disk. *f* is a layer of some readily melting substance, whereby the cap *e* is held in position. This substance may suitably consist of a mixture of stearic acid, olein, etc., whose melting-point is low (40–45 degrees centigrade).

The advantages of this method of construction are that a small quantity of the readily melting substance suffices to close the container, whereby rapid opening of the latter is insured; that the cap *e* readily drops off and the disk *d* prevents any particles of sodium present in the peroxid in rising to the surface and burning; further, that the costs of manufacture are essentially reduced, and the disks *d* have only to be pushed in laterally between two coils previous to tin-ning of the shell.

In use the contents of the receptacle I prefer to proceed as follows:—The contents of the vessel *a* are shaken into cold water: the alkali peroxid container *c* drops to the bottom. The water is slowly heated, and after the rings *f* of the readily melting substance have melted, the peroxid comes into direct contact with the water, alkali hydroxid and hydrogen peroxid being formed. Since in domestic households the copper is almost always heated from below, the substance closing the peroxid container will be melted by the direct transmission of heat from the hot bottom of the copper to the container.

On decomposition of the peroxid, bubbles ascend. After well stirring, the clothes are placed in the copper and the lye brought to the boil. After boiling for from 1-2 hours the clothes are rinsed, blued and hung up.

The wall of the container for the peroxid might also be of a soft, spirally wound wire. In this case each end of the container *c* could be closed by a simple imperforate disk and the shell itself wholly or partly covered with a coating of the readily melting substance. This constructional form has the advantage that the container adapts itself to the curved bottom of the copper and thus opens prematurely between the coils at the part lying upon the bottom, so that the gases rise from the lowest part of the copper at a low temperature of the water.

The walls of the peroxid container might naturally also be of stoneware, glass, metal, etc.

The new receptacle has the advantage that on the contents being shaken into water the peroxid container at once sinks alone to the bottom, so that all actions resulting occur below the surface of the water. This is not the case with the well known stearic acid cartridges, which are specifically lighter than water, are difficultly soluble and float on the surface of the liquid; nor with those receptacles with which, on their being emptied, the peroxid is distributed over the surface of the water. For in this manner the greater part of the active oxygen is lost. It is equally disadvantageous if the cartridge is located in a soap block, for soap dissolves with a certain rapidity only in quite hot water, and at this temperature the hydrogen peroxid liberated is decomposed too rapidly and loses its bleaching property.

Having now particularly described and ascertained the nature of the said invention

and in what manner the same is to be performed, I declare that what I claim is:

1. In combination, an exterior vessel containing washing powder, and an inner smaller box containing peroxid and embedded in the washing powder, said inner box having openings at both ends, a cover for each opening and a substance melting in warm water for securing the said covers to the box, said substance being separated from the peroxid by the said covers.

2. In combination, an exterior vessel containing washing-powder, an inner smaller box embedded in the washing-powder and containing alkali peroxid, the said inner vessel consisting of a shell of spirally wound wire, the coils of which are connected by tinning and have open ends, and a readily melting substance for closing said ends.

3. A vessel for alkali peroxid comprising an open ended shell of spirally wound wire, the coils of which are connected by tinning, a perforated disk fixed at each end of said shell, a cap covering the perforation in such disk and a readily melting substance retaining the said cap in position.

4. A vessel for alkali peroxid, comprising an open ended shell of spirally wound wire, the coils of which are connected by tinning, a perforated disk at each end of such shell the edges of which are held by two contiguous wire coils, a domed cap covering the perforation in the disk and a ring of readily melting substance retaining the cap in position.

In testimony that I claim the foregoing as my invention, I have signed my name in presence of two subscribing witnesses.

ERNST HERRMANN.

Witnesses:

ERNST FISCHER,
JOSEPH SIMON.