T. C. TAYLOR.

Putting up Alkalies.

No. 52,465. Patented Feb. 6, 1866.

FIG. 2

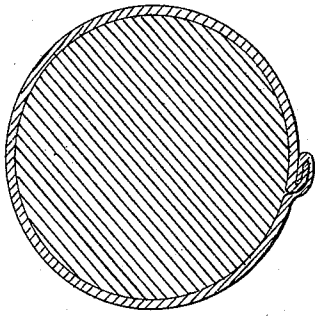
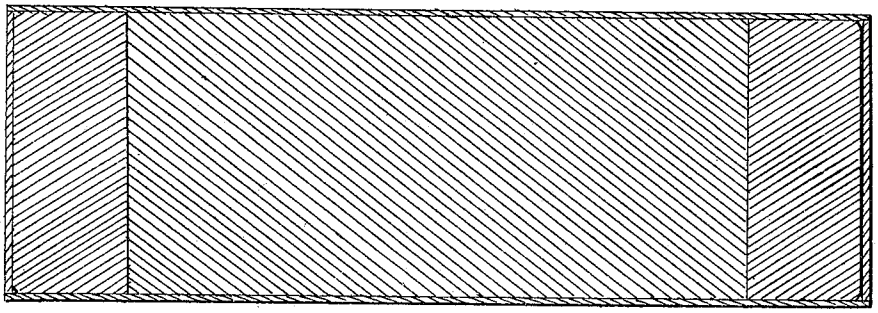


FIG. 3



FIG. 1



Witnesses

R. F. Campbell

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UNITED STATES PATENT OFFICE.

T. CHALKLEY TAYLOR, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN PUTTING UP CAUSTIC ALKALI.

Specification forming part of Letters Patent No. **52,465**, dated February 6, 1866; antedated January 26, 1866.

To all whom it may concern:

Be it known that I, T. CHALKLEY TAYLOR, of the city of Philadelphia, in the State of Pennsylvania, have invented a new and useful Mode of Putting Up and Preserving Caustic Soda or Potassa, so that it may be safely handled, transported, or kept for any length of time; and I do hereby declare the following to be a full and clear description of the same, which will be more fully understood by reference to the accompanying drawings, in which—

Figure 1 is a longitudinal section of the cylinder or case in which the soda is to be kept. Fig. 2 is a cross-section thereof; and Fig. 3 is an enlarged view of the lap-joint by which it is fastened.

It is well known that caustic soda or potassa has a strong affinity for water, which it rapidly attracts from the atmosphere. When in a state of deliquescence it is extremely acrid and dangerous to handle. At the same time it acts chemically upon most of the metals and corrodes the cases in which it is contained, which it does not do when in a perfectly dry state. It is therefore necessary to preserve it entirely free from all contact with the atmosphere, and the accomplishment of this object is one of the principal objects of my present invention. To effect this purpose I prepare a metallic case of a cylindrical form and left entirely open at both ends. This I construct of some sheet metal, and when intended for small packages I prefer tin for that purpose. I fasten the edges of the metal together by means of a lap-joint, as shown in the drawings. I do not solder this joint, as the high heat at which the soda is to be poured into this case would melt any solder such as is generally in use. I prefer making this case of equal size from end to end, but this is not necessary or important, except for the sake of convenience. Nor need it be in the form of a right cylinder with a circular cross-section. In fact the section may be elliptical or polygonal or any other desirable shape. For the sake of convenience in packing in larger boxes it may be advisable to make them of a square or polygonal form, so as to leave no vacant spaces between the several cases.

Having constructed the cases I place one end in dry sand, or some equivalent substance, of a proper depth—say a half or three-quarters of an inch. The melted alkali is then poured in until the can is filled to within the proper distance of the top—say a half or three-quarters of an inch. When the alkali is sufficiently cooled the cases are to be filled up with some proper cement. They are then inverted, and the other end filled in the same manner, when the process is complete. The cement used for this purpose may be variously composed. Common solidified coal-tar, such as is used for roofing, constitutes a very proper cement for this purpose. Common rosin, clear or mixed with oil, answers very well; and there are many other cements which will answer for this purpose.

The principal object sought is to entirely exclude the air from the alkali, for when kept entirely free from air or moisture it will not act chemically upon either the case or the cement.

After the alkali has become cool the seam on the side of the case may be soldered, though that is not necessary, inasmuch as the small quantity of air which finds its way through the seam produces a carbonate which serves as a cement or solder, and protects the caustic alkali within.

I am aware that caustic alkalies have been put up in small packages, inclosed in stone, glass, or earthenware, and sealed with noncorrosive cement; but these cases are liable to be broken. My purpose is to provide a case which will not be subject to this liability, and which at the same time will need no previous soldering, which would be melted by the introduction of the heated alkali.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The putting up of caustic soda or potassa in cases, which are originally left open at both ends, and afterward closed by cement, substantially in the manner above described.

T. CHALKLEY TAYLOR.

Witnesses:
R. T. CAMPBELL,
E. SCHAFER.