

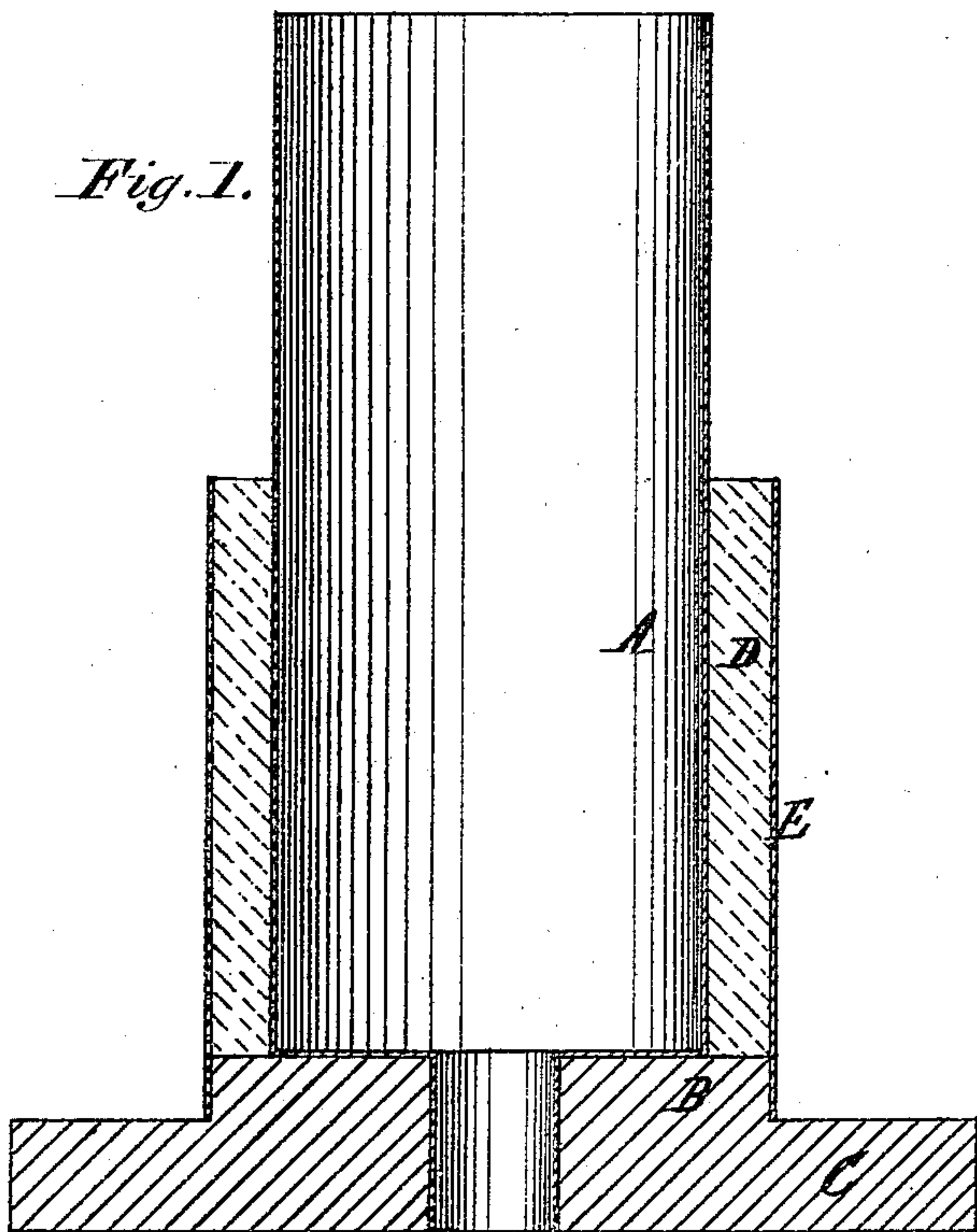
J. H. SEIBERT.

Improvement in Packages for Caustic Alkalies,  
Acids, and Salts.

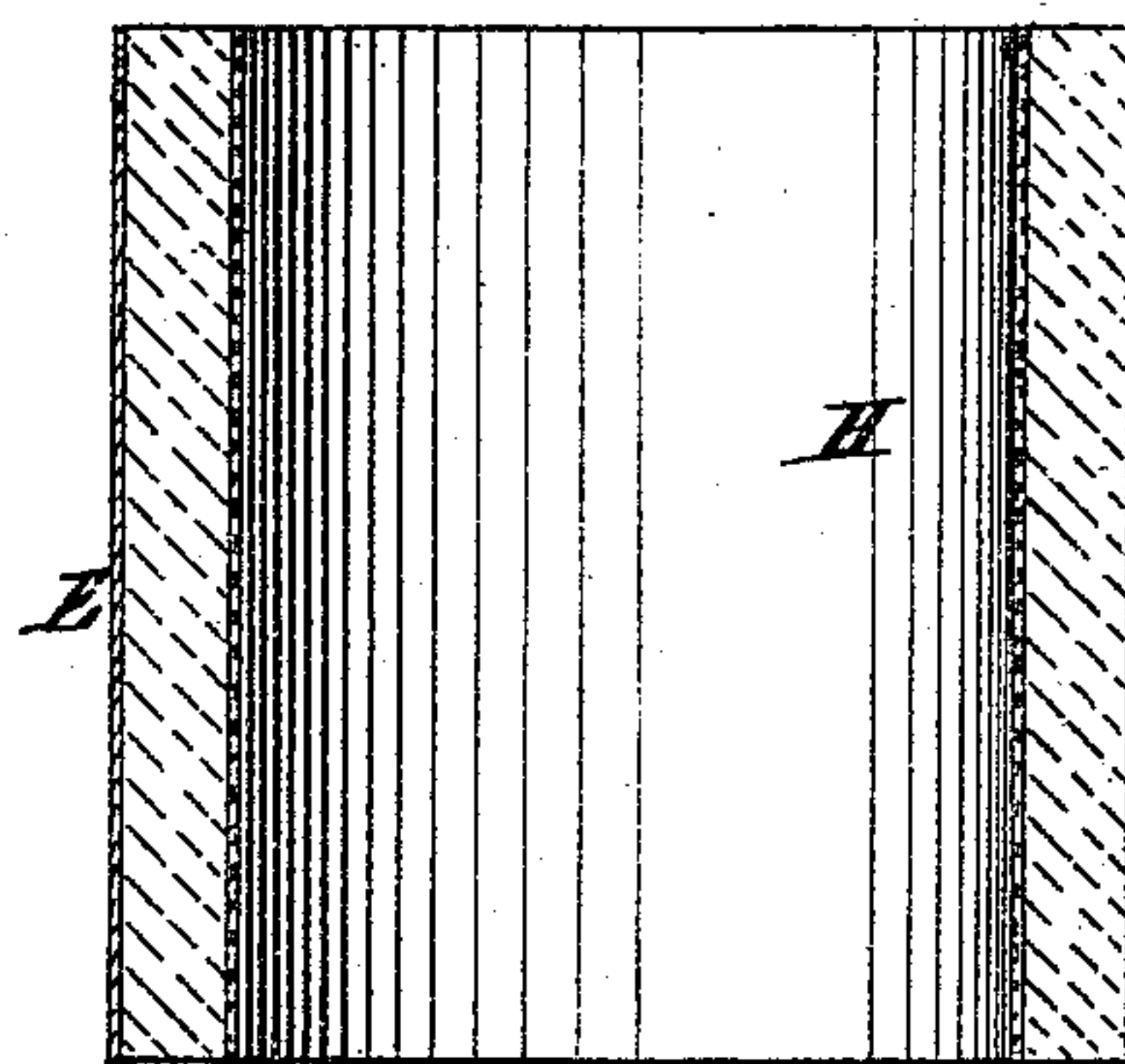
No. 123,544.

Patented Feb. 6, 1872.

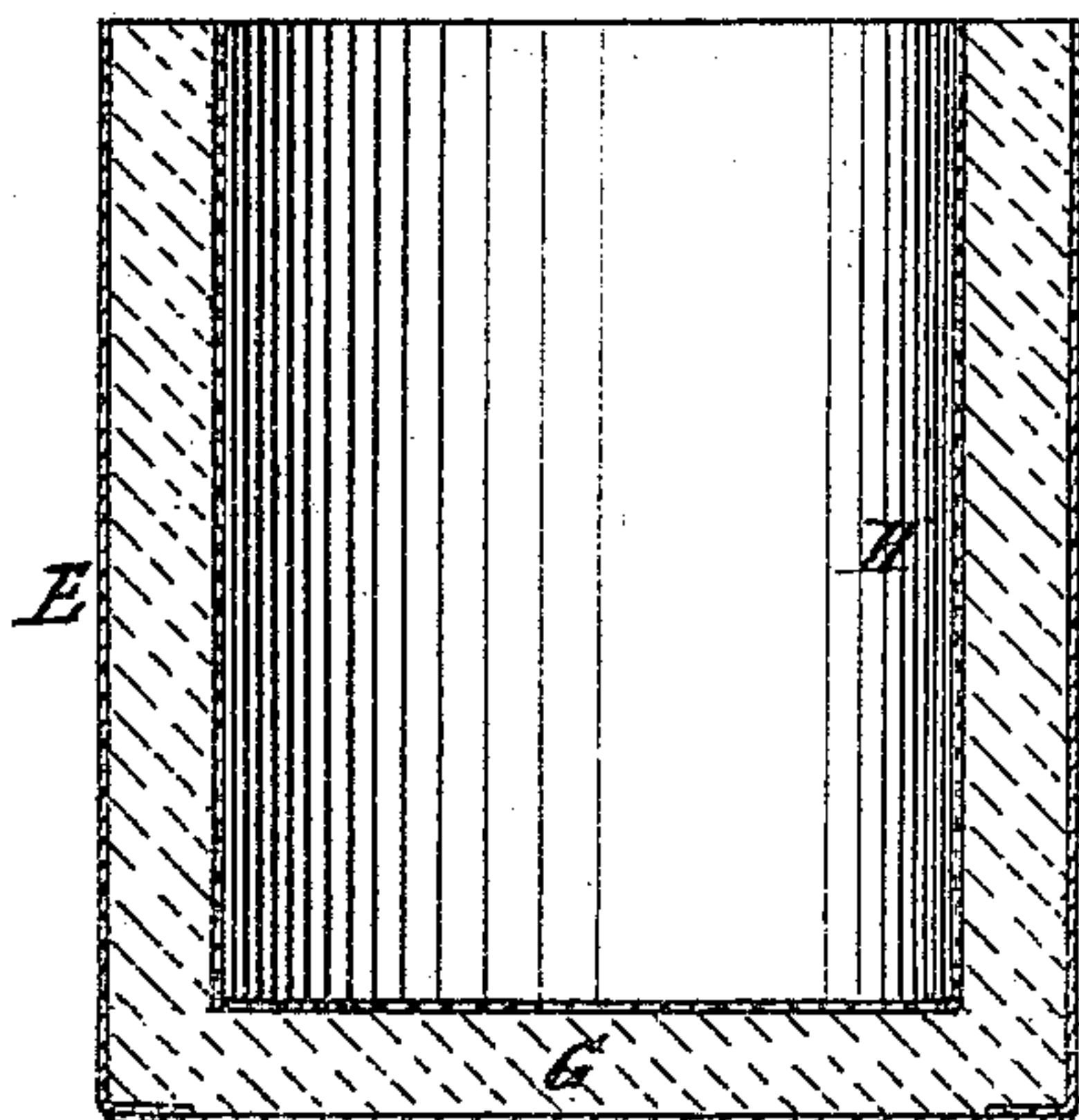
*Fig. 1.*



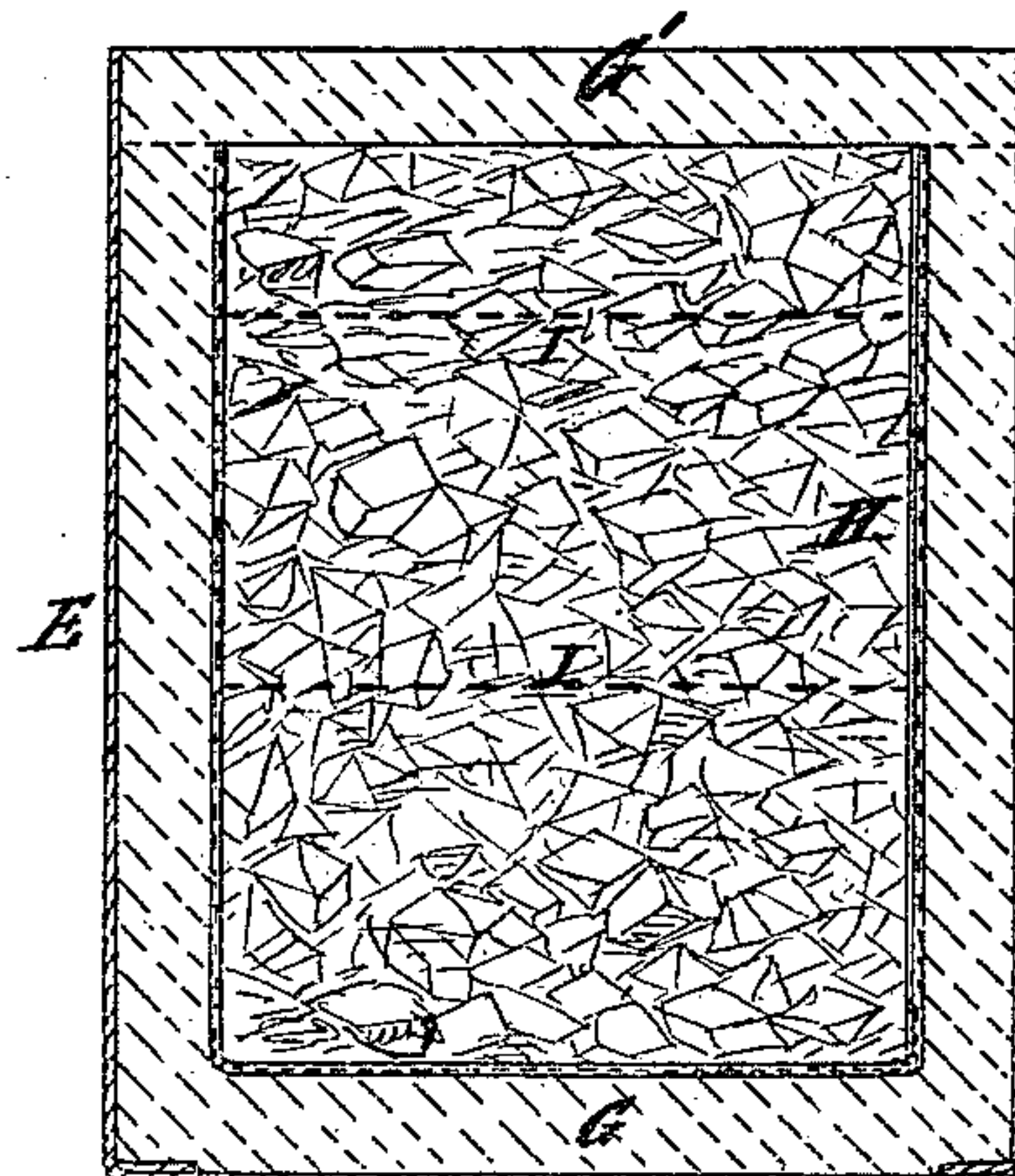
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



Witnesses:

J. C. Brecht.  
H. J. Ludlow

Inventor:

Jacob H. Seibert.  
By James L. Norris.  
Atty.



# UNITED STATES PATENT OFFICE.

JACOB H. SEIBERT, OF PHILADELPHIA, PENNSYLVANIA.

## IMPROVEMENT IN PACKAGES FOR CAUSTIC ALKALIES, ACIDS, AND SALTS.

Specification forming part of Letters Patent No. 123,544, dated February 6, 1872.

Be it known that I, JACOB H. SEIBERT, of the city and county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Packages for Caustic Alkali, Acids, and Salts, of which the following is a specification:

My invention consists in a package for putting up caustic or other alkalies, acids, or salts, made from plaster Paris, or other material capable of withstanding the action of said chemicals, the plaster Paris or equivalent material being cast or molded upon a protecting medium in such a manner as to form a package of the desired form or shape which will be cheap, light, and easily constructed, and that will possess all requisite firmness and strength, capable of protecting its contents against mechanical injury in handling and transportation, and also against the influence of moisture and external air. Another essential feature of my invention is to form the package by casting or molding it, and so uniting the heads with the body that the same will be hermetically sealed, and form, as it were, a solid homogeneous mass for containing the caustic or other alkalies, acids, or salts—such as caustic soda, blue and white vitriol, potash, condensed lye, &c.—so as to produce packages of any uniform size and weight, for sale in the market and for safe transportation, the protecting medium retaining the alkalies, acid, or acids in a pure state, and, in fact, enhance such chemicals in value. Another important feature of my invention is to arrange one or more disks or partition-plates, made of any desired material and covered with a protecting compound, within the packages as the same are being filled with chemicals, so that each compartment produced will be of uniform or graduated capacity, so that when one compartment is opened it will not disturb or injure the adjoining or next one.

In the drawing, Figure 1 represents a vertical central section of the improved package for caustic and other alkalies, acids, and salts. Fig. 2 is a section of the body of the package as formed on the mold. Fig. 3 is a similar section of said body with the bottom inserted therein. Fig. 4 is a similar section of the package when complete.

Similar letters of reference indicate corresponding parts in the several figures.

In forming the body of the package I employ

calcined plaster of Paris, or any other equivalent substance, and add thereto about one-tenth part of flour (preferably rye flour) or marble-dust, or any other equivalent and well-known substance that will act and harmonize with calcined plaster. To these ingredients is applied sufficient water or other liquid substance to render the mass plastic, when all are thoroughly mixed together. The paper, paste-board, muslin, or other fabric, E, is wrapped around the bed B to form the chamber D, one or more sheets being used, and, if desired, arranged so as to break joints. The plastic mass I cast in the space or chamber D, so that the same will adhere to the protecting medium and form a solid compact body, as in Fig. 1. After the plastic mass has "set" or indurated I withdraw the mold A and remove the cylinder or roll H from the bed B, the package being left formed, as shown in Fig. 2. When the package is thus formed it is ready to receive the bottom G, which I prefer to combine with the body by dipping the same into a plastic mass, of the required depth, composed of a compound same as that of which the body is formed, so that the two will unite and be hermetically sealed.

Instead of dipping the cylinder into a plastic mass, I can and intend to form the bottom by placing the said cylinder upon a stand or tray, and pour plastic material down into the cylinder so that it will combine with and form the bottom of the cylinder, leaving no joint, but being hermetically sealed, so as to effect absolute exclusion of air or moisture.

When the package is thus produced, as in Fig. 3, I coat its interior surface with one or more layers composed of a solution of rosin, sealing-wax, or other suitable material best adapted for the purpose. The package is now charged with the caustic or other alkali, acid, salt, or other chemicals to be packed, where a previously-prepared or coated disk or plate, of any material, is placed upon the contents leaving a short space between said disk and the top of the cylinder, into which space is cast the head G', the compound employed being the same as that composing the cylinder. The head is thus combined with, and, in fact, adheres to the inner surface of the cylinder, so as to form a homogeneous part of the same, leaving no perceptible joint.

When packages containing alkalies, acids, or



salts are once opened the condensed alkalies, &c., deliquesce, and unless all is immediately used it is rendered useless. To overcome this defect in such packages I arrange disks or partitions I I within the chamber or cavity of the package as the same are being filled with chemicals, the disks or partitions being first coated with rosin and sealing-wax, or other suitable protecting medium. By this means compartments are formed in the packages, so that when one compartment is opened to get access to the chemicals contained therein it can be used without disturbing or injuring the next adjacent one, which allows the consumer to use any given quantity, as each compartment can be graduated in capacity.

By these means a package is produced which protects the alkali or other material against injury from the influence of moisture of the atmosphere, and also against all danger from being spilled or lost by careless handling, in the transportation, or otherwise; and at the same time my package can be made cheap and with great facility.

I do not confine myself to calcined plaster of Paris and flour, or to any definite proportions, for I intend to employ any powdered substance that can be reduced to a plastic state for casting or molding the carrier or body, and

combining it with paper or other fabric as a protecting medium.

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

1. A package for alkalies, acids, salts, or other chemicals, made of a plastic compound by casting the same in a protecting wrapper of paper or other suitable material, for the purpose set forth.

2. Also the within-described process of forming packages for alkalies or other chemicals by means of a mold, A, a protecting-wrapper, E, and a bed, B, substantially in the manner specified.

3. Casting in the heads of packages for containing alkalies, acids, or salts, so that the said heads will combine with the package and form a solid mass, leaving no joint, as set forth.

4. Partitions I I arranged within packages for putting up alkalies, acids, or salts, for the purpose of forming compartments, for the purpose specified.

To the above I have signed my name this 24th day of January, 1872.

JACOB H. SEIBERT.

Witnesses:

JAMES L. NORRIS,  
WM. NONAN.