United States Patent [19]

Sanford

[11] **3,877,571**

[45] **Apr. 15, 1975**

[54] **CONTAINERS FOR PROTECTING COPPER AND SILVER COINS AND THE LIKE FROM CORROSION**

[76] Inventor: **Allan Sanford,** 5900 Arlington Ave., Salem, Mass. 10471

[22] Filed: **May 30, 1973**

[21] Appl. No.: **365,223**

[52] **U.S. Cl.** **206/83;** 206/205

[51] **Int. Cl.** **A45c 11/28**

[58] **Field of Search** 206/204, 205, 207, 209, 206/82, 83

[56] **References Cited**

UNITED STATES PATENTS

2,643,177 6/1953 Wachter et al. 206/207

FOREIGN PATENTS OR APPLICATIONS

302,014 12/1928 United Kingdom 206/209

552,281 4/1923 France 206/209

Primary Examiner—William I. Price

Assistant Examiner—Douglas B. Farrow

[57] **ABSTRACT**

A container has a tubular container portion closed at one end and open at the other and of a length to receive a predetermined number of copper or silver coins and loosely confine them as a stack. A cap closes the open end of the container portion and is secured thereto and has within it a body of a corrosion inhibiting agent inert with respect to copper and silver and an insert between the body and the upper end of the tubular portion. The insert has ports through which gas may escape but which are closed by a releasable seal until coins are to be stored in the container and the insert holds the coins against blocking the ports.

7 Claims, 3 Drawing Figures

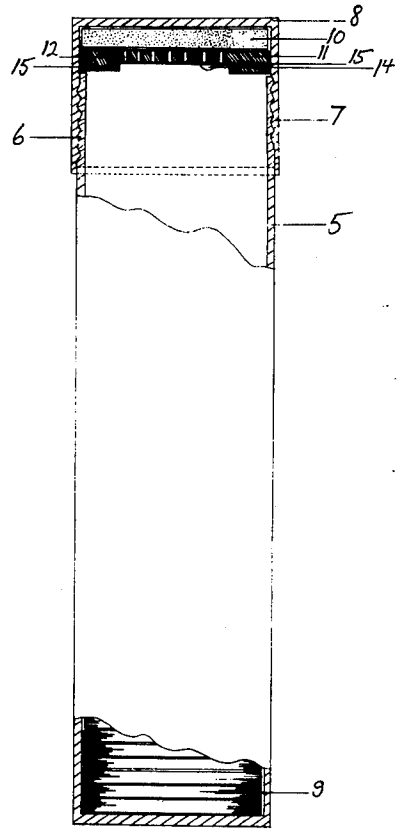


Fig.1

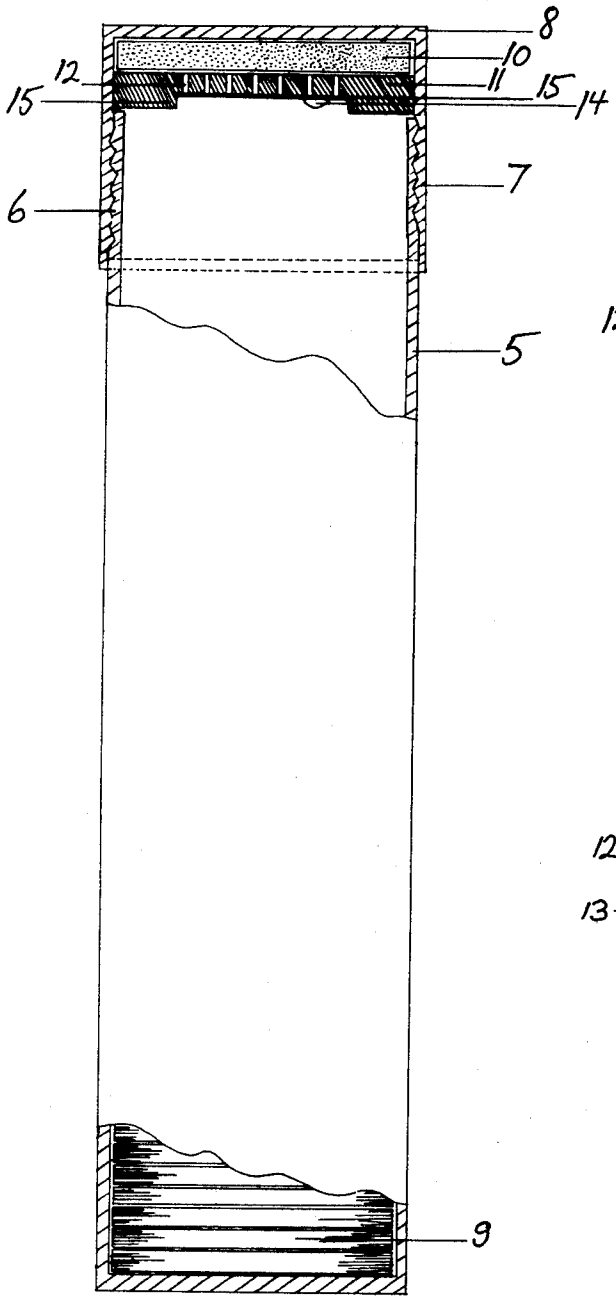


Fig.1

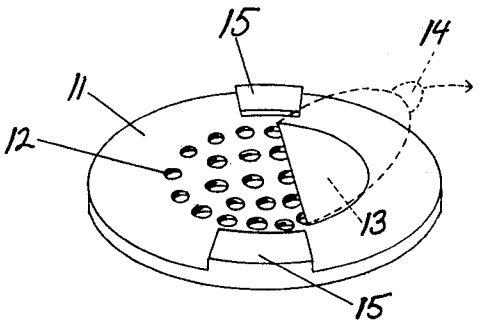


Fig.2

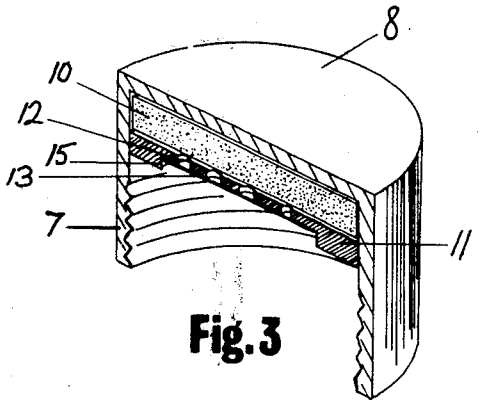


Fig.3

CONTAINERS FOR PROTECTING COPPER AND SILVER COINS AND THE LIKE FROM CORROSION

BACKGROUND OF THE INVENTION

Numismatists collect and store uncirculated and proof sets of copper and silver coins, copper composition coins, and medals. A common practice is to place a number of such coins in a container consisting of a plastic tube closed by a screw cap. After a period of time, varying with climate and the place of storage, it is usually found that a number of the coins in that container will have a noticeable amount of corrosion on at least one face. Such corrosion is usually called "pitting" in the case of copper coins but it may take other forms, and in the case of silver coins, it takes the form of a tarnish. Serious collectors of coins and investors in such coins will usually not purchase such copper coins at uncirculated or proof set prices and while uncirculated tarnished coins do not lose value, except in the case of proof sets, consequent loss of value to the owner is directly attributable to the failure of such containers to protect their contents.

THE PRESENT INVENTION

The general objective is to provide containers for copper and silver coins, copper and silver composition coins, medals and like articles that will hold at least one such article and that contains a corrosion inhibiting agent, inert with respect to copper and silver and capable of affording protection for the stored article or articles over long periods of time. As the invention is primarily concerned with the protection of copper coins, it is described herein with particular reference thereto and the term "coin", as used elsewhere herein, also means such other articles.

In accordance with the invention, this objective is attained by providing a container having an open, coin-receiving portion closed by a cover removably secured thereto. An insert and a body of the corrosion inhibiting agent are within the container, the insert between the body and the position to be occupied by a coin or coins and operable to permit the escape of gas from the body to said position and to hold the coin or coins from blocking that flow. The insert is provided with a releasable seal blocking gas flow until the container is to be used for coin storage.

A particular objective of the invention is to provide such a container for the reception of a predetermined number of coins and to loosely confine them as a stack, an objective attained with a coin-receiving portion, a tube open at one end and the cover, and a cap detachably secured to its open end. The insert and the body are held in the cap with the central portion of the insert rendered permeable to gas developing as the agent decomposes by ports but protected by the removable seal.

A particular objective of the invention is to provide an insert caught between the cap and the open end of the tube that has shoulders spaced and arranged to be engaged by the margins of the uppermost coin and hold that coin from blocking the ports.

Another objective of the invention is to use, as the corrosion inhibitor a vapor-phase inhibitor such as are referred to in the following:

"Corrosion and Corrosion Control"; Pages 237 – 238; Prof. Herbert H. Uhlig; 1971

"Corrosion and Oxidation of Metals"; Pages 531 – 533; U. R. Evans; 1960

"Metallic Corrosion Inhibitors"; Pages 158 – 163; I. N. Putilova, Pergamon Press; 1960

BRIEF DESCRIPTION OF THE DRAWINGS

A preferred embodiment of the invention is shown in the accompanying drawings and

FIG. **1** is a partly sectional side elevation, on a substantial increase in scale, of a container for protecting copper and silver coins;

FIG. **2** is perspective and vertically sectioned view of the insert and the disc-like body of the corrosion inhibitor as seen from the gas permeable face of the insert with the seal therefor partly removed;

FIG. **3** is a section taken vertically through the cap with the insert and the disc-like body in place.

THE PREFERRED EMBODIMENT OF THE INVENTION

A container in accordance with the invention consists of a tube **5**, desirably of a translucent material, glass or plastic, closed at its bottom end and externally threaded as at **6** at its open end to enable the internally threaded sleeve portion **7** of the cap **8** to be detachably secured thereto. The tube **5** shown in the drawings is dimensioned to receive a predetermined number of coins **9**, of the same face value and loosely confine them as a stack.

In order that the coins **9** may be protected against corrosion for long periods, each cap **8** has within it a disc-like body **10** of, or a body impreganted with a volatile, corrosion-inhibiting agent that is inert with respect to copper and silver and a retaining insert **11** that is a press fit within the cap **8** and has the function of sealing the body **10** in the cap. The insert **11** has in its central portion a plurality of ports **12** in communication with the body **10** but these are, until coins are to be stored in the container, blocked by the impermeable seal **13** which has an adhesive coat securing it to the disc **11** and provided with a tab **14** enabling it to be readily pulled free.

The disc is also provided with diametrically opposed shoulders **15** adjacent its periphery that are of a radial extent such that not only are they engaged by the mouth of the tube **5** but also extend inwardly to be engaged by marginal portions of the uppermost coin in the stack and positively prevent it from blocking the ports **12.**

Suitable volatile corrosion inhibiting agents inert with respect to copper and silver are known. They include dicyclohexylammonium nitrite and also a solution containing 1.7% diisopropylammonium nitrite and 0.4% ethanolamine salicylate or 0.9% sodium mercaptobenzthiazole. The copper in structures consisting of steel and copper components and also silver may be protected, as disclosed by "Metallic Corrosion Inhibitors" in the presence of diisopropylammonium nitrite by adding 0.2% benzoin a-benzoin oxime, b-benzoin oxime, various isomeric napthylaminesulphonic acids, O-, m-, and p-phenylene-diammine, thiodiethylene glycol, the sodium salt of mercaptothiazdine or b-(2-mercaptobenzthiazyl-) propionic acid.

I claim:

1. A container for use in protecting at least one copper or silver coin and the like, said container comprising a coin-receiving portion and a cover closing said

portion and secured thereto, an insert within the container, a seal releasably attached to said insert and operable to block said flow until a coin is to be placed in said container, and a body also within the container and including a volatile corrosion inhibiting agent thaqt is inert with respect to copper and silver, said insert between said body and the position to be occupied by a coin and operable to permit the flow of gas as the agent decomposes to said position and to prevent a coin in said position blocking said flow.

2. The container of claim **1** in which the coin receiving portion is a tube closed at one end and open at the other and of a length such that a predetermined number of coins may be stored therein as a stack.

3. The container of claim **2** in which the cover is in the form of a cap and the body and the insert are secured therein.

4. The container of claim **2** in which the cover is in the form of an internally threaded cap, the mouth portion of the tube is externally threaded to enable the cap to be threaded thereon, and the insert is a press fit within the cover and is marginally engaged by the mouth of the tube when the cover is secured thereto.

5. The container of claim **2** in which the insert includes a body containing the agent and is the press fit within the cover and its central portion is gas permeable.

6. The container of claim **5** in which the insert includes spaced shoulders extending inwardly from its periphery but terminating short of the gas permeable surface with their spacing such that a coin is positively held by said shoulders from blocking the flow of said gas through said central portion.

7. The container of claim **6** in which a series of holes extending through the insert in its central portion render the insert gas permeable and the releasable seal closes said ports.

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UNITED STATES PATENT OFFICE

CERTIFICATE OF CORRECTION

Patent No. 3,877,571 Dated April 15, 1975

Inventor(s) Allan Sanford

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

On the Title Page in item [76] the inventor's address should read:

-- 5900 Arlington Avenue,
Riverdale, New York 10471 --.

Signed and Sealed this

twentieth Day of April 1976

[SEAL]

Attest:

RUTH C. MASON
Attesting Officer

C. MARSHALL DANN
Commissioner of Patents and Trademarks