

UNITED STATES PATENT OFFICE.

CHARLES T. DAVIS, OF BROOKLYN, NEW YORK, ASSIGNOR TO HENRIETTA R. DAVIS.

POISON-TABLET.

1,335,488.

Specification of Letters Patent. Patented Mar. 30, 1920.

No Drawing.

Application filed June 18, 1919. Serial No. 305,174.

To all whom it may concern:

Be it known that I, CHARLES T. DAVIS, a citizen of the United States, residing at Brooklyn, New York city, in the county of Kings and State of New York, have invented new and useful Improvements in Poison-Tablets, of which the following is a specification.

My invention relates to pharmaceutical and chemical tablets and pills, and particularly to poison tablets having means for indicating their nature and for preventing injury if taken accidentally.

My object is to provide a tablet having a protective coating which will prevent the tablet body from being attacked by the fluids of the alimentary tract during passage therethrough if swallowed by accident, and yet sufficiently frangible to permit the tablet to be readily broken to expose the chemical content or tablet body to a solvent.

A further object is to combine such protective coating with a repulsive tasting substance to prevent accidental swallowing. Further, I may provide a distinctive coloring as an additional precaution.

A further object is to provide a coating for the tablet capable of carrying a non-acid or chemically inert dye. I also may provide a coating which can be dissolved in a common solvent but is insoluble in the fluids of the alimentary tract.

Another object is the provision of a coating soluble in a common solvent but sufficiently impermeable to prevent deliquescence on contact with atmospheric or other moisture.

My invention consists of a tablet body which may be of irritant or poisonous nature, such as is commonly used for germicidal purposes, as for instance a preparation of antiseptic and germicidal solutions, one common example being the usual bichlorid of mercury tablet. Upon such tablets I place a protective coating, composed of a relatively frangible, though impermeable and indigestible, substance, and preferably one that can be melted and sprayed on the tablets during tumbling, in the usual way for coating tablets, or one capable of being applied while in a viscose or plastic condition. I may, for instance, use a wax, such as paraffin, beeswax, or canauba wax; cellulose products, such as collodion; or rosin. These may be used separately or in any de-

sired combination; or any other substance may be used that possesses the requisite qualifications and which may be found better suited for the purpose than those suggested.

I may also provide the tablet with a stable, or non-volatile, coating of bitter or repulsive tasting substance, such for instance as bitter aloes. This coating may be placed outside of the impermeable coating, or the bitter or repulsive substance may be incorporated with the impermeable coating.

The tablet is preferably given a distinctive coloring to indicate its nature, which may be the usual blue employed to indicate poison tablets, or any other distinctive color. The dye may be incorporated either in the tablet body or in the coatings, but preferably is carried by one or both of the coatings. It is also desirable to use a non-acid or chemically inert dye which does not tend to rust surgical instruments when the tablet is used to make a bactericidal solution for sterilizing the instruments. In ordinary germicidal tablets, where the dye is incorporated with the tablet, it is often necessary to use an acid dye or a dye that is chemically active; but the incorporation of the dye in the coating of my tablet makes possible the use of non-acid or inert dyes therein. The dye is also preferably soluble in the same medium as the tablet, for the purpose of producing a characteristic color in the solution.

In use, the color serves as a primary warning or protection against accidentally taking the tablet. The disagreeable taste affords a further and substantial protection if the tablet is accidentally taken into the mouth, clearly indicating the nature of the tablet and producing a very strong involuntary or spontaneous impulse to expel it. This protection is of course particularly valuable when the tablets are handled in the dark. If, in spite of these precautions, the tablet should be swallowed, the protective or impermeable covering will permit it to pass completely through the alimentary tract without the exposure of the contents.

When a tablet is to be used to make an antiseptic or germicidal solution, it is broken before being dropped into the solvent, thus exposing the soluble tablet body, the fragile impermeable coating permitting it to be easily broken. However, the impermeable

coating may be made of a substance soluble in a particular solvent, such as alcohol, though insoluble in the fluids of the alimentary tract and preferably insoluble in water. In such a case it would be unnecessary to break the tablet before dropping it into the solvent.

While I have found my invention to be useful with tablets of various kinds, it is particularly useful in connection with germicidal tablets containing potassium-mercuric-iodid, such as is disclosed in my Patent No. 1,276,119. In this tablet, and other germicidal tablets, it is the practice to combine the fundamental chemical used with a relatively large quantity of a stabilizing substance, such as sodium chlorid or common salt, to prevent deliquescence. This produces a tablet much larger than would otherwise be necessary, and the impermeable coating makes possible the use of the germicidal substance alone, omitting the stabilizer, resulting in considerable economy in manufacture and in a much smaller tablet of equal strength.

Further, the thorough protection against deliquescence facilitates the inclosure of such tablets with articles which might otherwise be damaged thereby, such as sutures.

In addition to the obvious value of this invention for saving human lives through the prevention of accidental poisoning, its extreme practicability becomes apparent when it is pointed out that the coatings of the tablets may be applied through the use of the standard machinery and apparatus already employed by practically all manufacturers of pharmaceutical tablets; and that, by virtue of the efficiency of the protective or safety coatings, it will no longer be essential to manufacture poisonous tablets in square, oblong, coffin or other distinctive shapes; these qualifications rendering practicable the widespread practice of the invention by various manufacturers, and at a low manufacturing cost.

While the form of my invention, which I have herein disclosed, is the preferred form, it is obvious that alterations and changes may be made therein within the scope of the appended claims without departing from the spirit of the invention.

What I claim is:

1. A poison tablet or pill having a frangible coating, impermeable to the fluids of the alimentary tract.
2. A poisonous tablet having a frangible

coating insoluble in the fluids of the alimentary tract.

3. A pharmaceutical preparation suitable for preparing antiseptic and germicidal solutions, said preparation having an applied coating insoluble in the fluids of the alimentary tract.

4. A tablet having a coating insoluble in the fluids of the alimentary tract but soluble in alcohol.

5. A poison tablet or pill containing a deliquescent substance having a coating impermeable to the fluids of the alimentary tract.

6. A tablet or pill containing potassium-mercuric-iodid and having a coating impermeable to the fluids of the alimentary tract.

7. A tablet or pill containing a deliquescent substance having an impermeable coating containing a hydrocarbon substance.

8. A tablet or pill containing a deliquescent substance having a coating of an impermeable substance liquefying at a temperature suitable for the application of the coating by spraying.

9. A pharmaceutical tablet or pill having a coating impermeable to the fluids of the alimentary tract, said coating carrying a repulsive tasting substance.

10. A pharmaceutical tablet or pill having a coating impermeable to the fluids of the alimentary tract, and a second coating carrying a repulsive tasting substance.

11. A pharmaceutical tablet or pill having a coating impermeable to the fluids of the alimentary tract, and coloring matter carried by said coating.

12. A pharmaceutical tablet or pill having a coating impermeable to the fluids of the alimentary tract and non-acid coloring matter carried by the coating.

13. A pharmaceutical tablet or pill having a coating impermeable to the fluids of the alimentary tract, and an outer coating carrying coloring matter.

14. A pharmaceutical tablet or pill having a coating impermeable to the fluids of the alimentary tract, and a repulsive tasting outer coating carrying coloring matter.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CHARLES T. DAVIS.

Witnesses:

E. C. PIERSON,
BENJ. F. HIRSCH.