

No. 701,438.

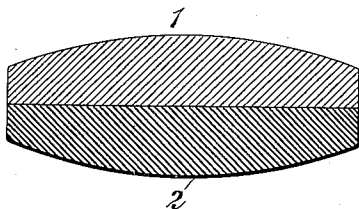
Patented June 3, 1902.

R. M. WHYTE.

COMPRESSED TABLET.

(Application filed Feb. 10, 1902.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

ROBERT M. WHYTE, OF JERSEY CITY, NEW JERSEY, ASSIGNOR TO SCHIEFFELIN AND COMPANY, OF NEW YORK, N. Y., A COPARTNERSHIP.

COMPRESSED TABLET.

SPECIFICATION forming part of Letters Patent No. 701,438, dated June 3, 1902.

Application filed February 10, 1902. Serial No. 93,296. (No specimens.)

To all whom it may concern:

Be it known that I, ROBERT M. WHYTE, a citizen of the United States, residing in Jersey City, in the county of Hudson and State of New Jersey, have invented a certain new and useful Improvement in Compressed Tablets or Pills, of which the following is a specification.

My invention has relation to a novel form of compressed tablet, pill, or the like, and has for its object the provision of means whereby may be given appropriate doses in proper proportions of two drugs having the property of reacting when wet and producing in a nascent or fresh condition a compound having therapeutic properties.

Many pharmaceutical preparations are of such a nature as to lose their value in time by more or less rapid oxidation or other chemical change. Such substances are necessarily administered immediately after preparation, and in order to render them conveniently available to ordinary purchasers means must be adopted for separating the constituent parts until the dose is to be given.

It has been found that many substances useful in producing a desired drug react more or less rapidly even when mixed dry, and are thus subject to deterioration. To prevent this, expensive and complicated devices have been resorted to in producing doses of such drugs for universal consumption in a form insuring the separation of the two reagents until the dose is administered. My present invention provides a novel and improved means to this end and includes a novel process for producing such means with a considerably-diminished expense.

My invention is illustrated in the accompanying drawing, which illustrates in central section a preferred form of my improved tablet or pill.

For greater clearness I shall describe my invention as applied to the production of nascent ferrous carbonate by the reagents used in what are known as "Blaud's pills." It is to be understood, however, that my invention is not limited to use of the specific reagents or drugs herein named nor to pills or tablets for the final production of any one chemical substance.

In the drawing the tablet is shown as produced in two layers in contact through the middle. The relative thickness of these layers may be whatever proves desirable in practice, and the size of the tablet usually depends upon the quantity appropriate for a single dose of the drug in question.

In the drawing is shown at 1 a layer of one of the reagents—such, for instance, as carbonate of potash (K_2CO_3)—while the layer 2 represents the layer of the second reagent—as, for instance, ferrous sulfate, ($FeSO_4$). Upon solution either in water, before taking, or in the stomach these reagents produce a greenish ferrous carbonate, which is the beneficial agent in Blaud's pills. In a short time, however, this substance if exposed to the air absorbs oxygen, changes color, and becomes ferric carbonate, $Fe_2(CO_3)_3$, which is valueless as a drug.

I have found that if the dry potassium carbonate and ferrous sulfate be intimately mixed and compressed into a tablet there will be a reaction soon resulting in the production of ferric carbonate and consequent deterioration of the tablet. On the other hand, by compressing these reagents together in layers, as shown at 1 and 2, the reaction can only take place along the surface of contact, and I have found that here the extent of the reaction is so small as not to materially impair the value of the tablet.

In making my pill or tablet I prefer the following cheap and simple method, although it is to be understood that in its broadest aspect my improved tablet or pill may be produced by any desired process. Any well-known tablet-mold being used, it is first filled to a proper depth with one of the reagents in a dry powdered form. Upon this I place the proper quantity of the second reagent in the same form and apply the necessary degree of pressure. There is thus required only a single compression-stroke and the resultant composite tablet will prove permanent and fit for sale and shipment.

While my invention is not limited in its broadest aspect to the use of any given substance, there are certain chemicals which are known to react and produce a gaseous product in material proportions. Such chemicals

are not appropriate for use where the tablets are to be kept long before using, as there is apt to be such a disengagement of gas along the surface of contact as to split the tablet in two. It is further obvious that while in the drawing I have shown the two parts of my tablet or pill set one beneath the other the same end is attained where the two parts or layers are set side by side in contact, although the form shown is preferable, as it facilitates the operation of compression in the mold.

What I claim is—

1. The method of making composite dry tablets or pills which consists in forming a layer of a dry powdered chemical, then forming a second layer in contact with the first of a dry powdered chemical capable of reaction with the first chemical and compressing the entire mass.

2. A composite pill or tablet consisting of two parts or sections of dry chemicals compressed together in contact the one section with the other, said chemicals being adapted when wet to react and produce a desired drug.

3. A composite pill or tablet consisting of two layers of different chemicals compressed together in contact, said chemicals being adapted when wet to react and produce a desired drug.

4. In a composite pill or tablet consisting of dry chemicals which tend when mixed and compressed together to suffer deterioration, a section of each of such chemicals unmixed with the other, said two sections being compressed together in contact, the one with the other.

5. A composite pill or tablet consisting of two parts or sections each composed of a separate dry chemical, said sections being compressed together in contact the one with the other, and said chemicals, when allowed to react not producing material quantities of gas.

ROBERT M. WHYTE.

Witnesses:

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