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D. F. PINCOCK

2,134,145

AMPULE

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Fig. 1.

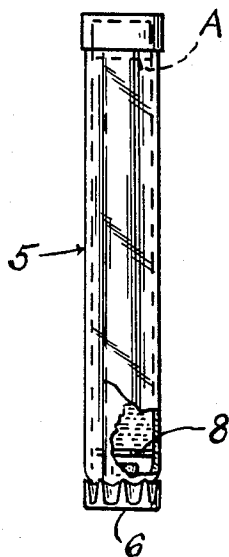


Fig. 2.

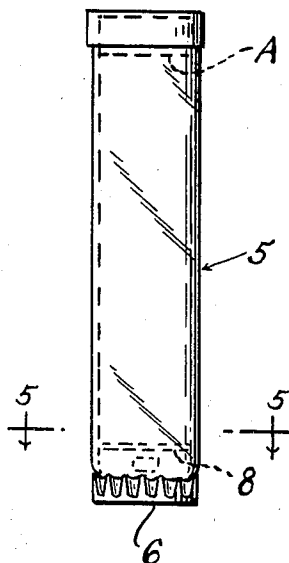


Fig. 3.

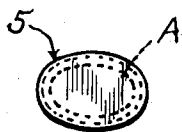


Fig. 5.

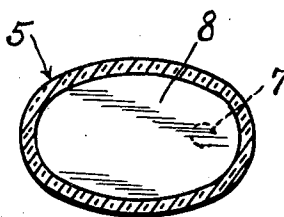
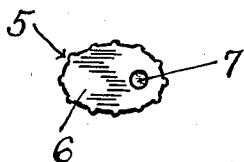


Fig. 4.



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UNITED STATES PATENT OFFICE

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Application September 22, 1936, Serial No. 101,995

1 Claim. (Cl. 128—218)

This invention relates to surgical instruments classified as hypodermic syringes and more particularly to an ampule therefor.

The primary object of this invention resides in the provision of an ampule adapted to contain a liquid in one compartment thereof and a chemical compound or tablet in another compartment adjacent thereto in order that communication between the compartments will be established and the chemical compound or tablet mixed with the liquid upon seating the ampule in operative position in a hypodermic syringe or other similar surgical instrument.

Another object of this invention resides in the provision of an ampule, for hypodermic syringes or the like, having its interior divided by a laterally disposed partition adapted to be tilted or dislodged, by the inwardly projecting extremity of the needle of a hypodermic syringe, to permit the contents of the ampule on opposite sides of the partition to become mixed upon seating the ampule in the syringe.

A further object of this invention resides in the provision of an ampule, for hypodermic syringes, having a removable partition therein spaced from a particularly constructed cap adapted to be penetrated by the needle of a hypodermic syringe at a point remote from the center of the ampule so as to tilt or dislodge the partition to establish communication between the compartments on opposite sides thereof.

A still further object of this invention resides in the provision of an ampule, of substantially oval-shape in cross section, having a similarly shaped removable partition therein disposed in spaced relation to a cap of such construction that the inwardly projecting extremity of the needle in a hypodermic syringe will be directed adjacent one wall of the ampule, upon seating of the ampule in the syringe, into engagement with the partition and thus cause it to tilt or be dislodged from its normal position to establish communication between the compartments on opposite sides of the partition.

Aside from the aforesaid objects, this invention resides in the provision of an ampule of such cross sectional shape as will form an adjunct to a hypodermic syringe having its needle disposed at a point remote from the center of the syringe so as to permit the needle to be inserted in the ampule adjacent one wall thereof to cause a removable partition in the ampule to be dislodged from its normal position.

With these and other objects in view this invention resides in certain novel features of con-

struction and arrangement of elements to be hereinafter more particularly set forth in the specification, illustrated in the accompanying drawing and pointed out in the appended claim and, while this disclosure depicts my present conception of the invention, the right is reserved to resort to such changes in construction and arrangement of elements as come within the scope of the claim.

In the accompanying drawing forming a part of this application:

Fig. 1 is an end view, partly in section, of an ampule as constructed in accordance with this invention.

Fig. 2 is a side view thereof.

Fig. 3 is a plan view thereof.

Fig. 4 is a bottom view thereof.

In the present illustration of this invention the numeral 5 designates, in general, an ampule adapted to be used in a hypodermic syringe or other type of surgical instrument wherein replacement cartridges or the like are used, said ampule is preferably formed of glass and is of substantially oval-shape in cross section.

Suitably secured to one end of the ampule is a cap 6 provided with a weakened area 7 remote from its center to permit puncturing of the cap at such point that the needle of a particularly constructed hypodermic syringe will project into the ampule adjacent the wall thereof and cause a removable partition 8 within the ampule to be tilted or dislodged from its normal sealing position.

That end of the ampule opposite the cap 6 is sealed in the usual manner by a conventional piston, herein indicated by the letter A, which is adapted to be forced toward the cap by means forming a part of the conventional hypodermic syringe (not shown) to pump the contents of the ampule therefrom.

With an ampule constructed as aforesaid, it will be noted the partition 8 divides the same into separate compartments one of which in the present instance contains a liquid and the other a chemical tablet or the like and, through the instrumentality of the offset weakened area 7 of the cap 6, the needle of a particularly constructed hypodermic syringe as set forth in my application Ser. No. 101,994 filed September 22, 1935, is permitted to penetrate the cap and tilt or dislodge the removable partition so as to establish communication between the compartments whereupon the contents of one compartment will flow into the other.

Although the present disclosure of the ampule

involves a substantially oval-shaped embodiment of elements in order to dispose the point of entrance of the needle of a hypodermic syringe considerably remote from the axial center of the ampule and adjacent the inner wall thereof, 5 ampules of other cross sectional configurations may be successfully used without departing from the salient feature of puncturing the cap remote from its center so the needle will tilt or dislodge the partition rather than puncture the same to 10 establish communication between the compartments on opposite sides thereof.

With this invention fully set forth it is manifest that an ampule is provided which is cheap 15 of manufacture and adapted to establish communication between the compartments thereof without destroying the partition or clogging the needle of the hypodermic syringe.

Having thus described my invention what I claim and desire to protect by Letters Patent is:

An ampule comprising a cylindrical body oval in cross section and having one end portion reduced to form a neck, a head for said body applied against the neck and having walls crimped 5 about the neck to firmly hold the head in place thereon, said head being also of oval outline and adjacent one end being formed with a weakened portion adapted to be penetrated by a needle of a 10 syringe, and a displaceable partition extending transversely in the body in spaced relation to the neck thereof and adapted to be tilted out of place when an end thereof is engaged by a needle 15 passed into the body through the weakened portion of the head.

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