

June 26, 1962

D. WEINER

3,040,934

DISPENSER FOR DENTAL ALLOYS AND MERCURY

Filed April 25, 1960

2 Sheets-Sheet 1

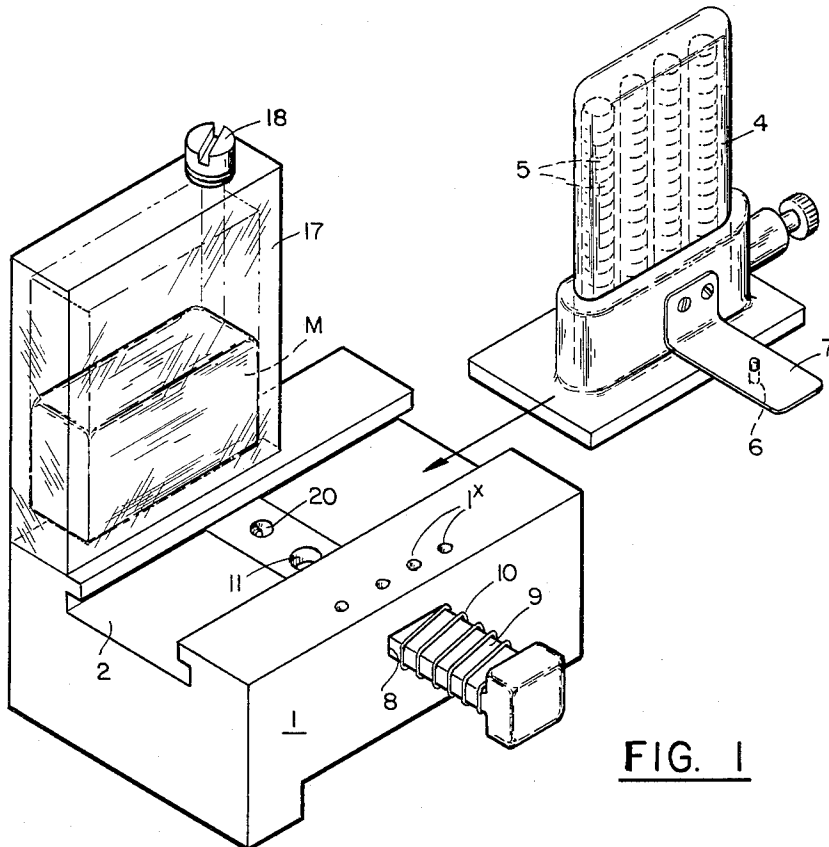


FIG. 1

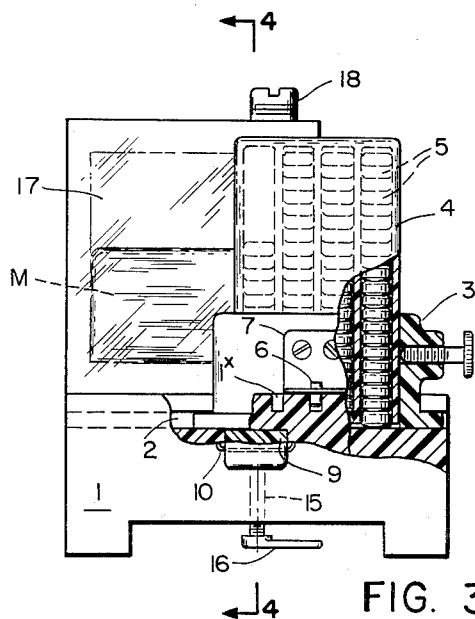


FIG. 3

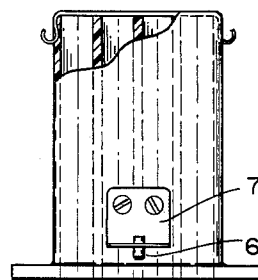


FIG. 2

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2 Sheets-Sheet 2

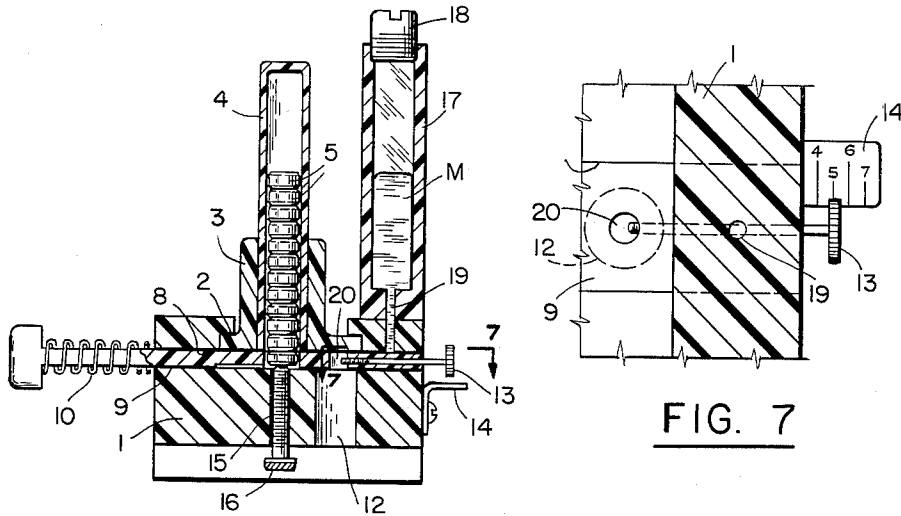


FIG. 4

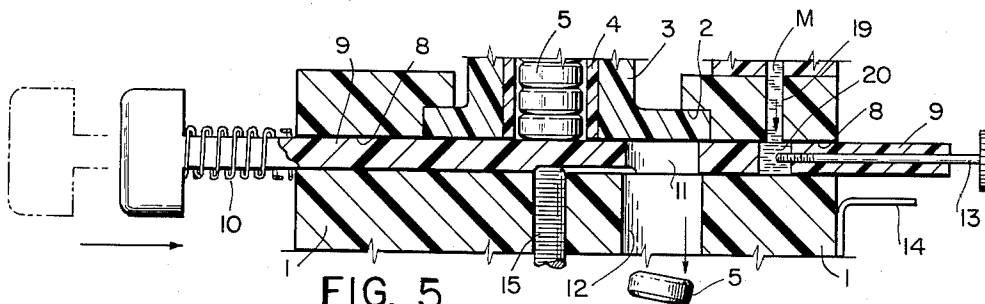


FIG. 5

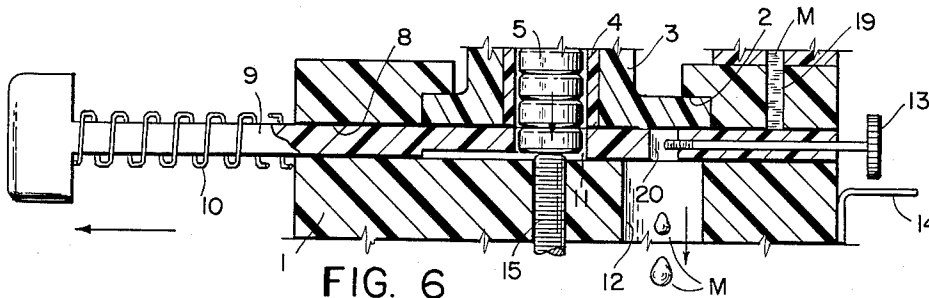


FIG. 6

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DISPENSER FOR DENTAL ALLOYS AND MERCURY

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3 Claims. (Cl. 222-137)

The object of the present invention is to provide an improved device, primarily for use by dentists, in dispensing measured silver alloy and mercury, which, when combined, form amalgam for tooth-filling purposes. The invention also has utility in other fields.

The device employs a multi-stack holder for silver alloy pellets by which one or more stacks may be composed of pellets of one thickness and weight, while one or more of the remaining stack may be of pellets of lesser or greater thickness and weight. Means are provided to support the stack holder and to enable manual adjustment of the holder and thereby selective registration of each stack with a discharge port controlled by a plunger. Means at the discharge port and plunger compensating for different thicknesses of pellets are provided, and further objects of the invention will be hereinafter described with reference to the accompanying drawings, in which:

FIG. 1 is a composite view in perspective showing from the front, an embodiment of the invention, with the stack holder ready for insertion.

FIG. 2 is a front elevation, partly broken away, showing a modified stack holder.

FIG. 3 is a view in front elevation of the assembled device, certain parts being shown broken away.

FIG. 4 is a vertical section on the line 4-4, FIG. 3.

FIG. 5 is a fragmentary vertical section showing an intermediate part of FIG. 4 enlarged, the plunger being in full inner position.

FIG. 6 is a view similar to that of the preceding figure, but with the plunger fully retracted.

FIG. 7 is a detail view in plan and broken away to show the mercury control-pin gauge.

Referring to the drawings, I have shown at 1 a base member formed with a key-channel at 2, to slidably receive opposed flanges of a stack-holder 3 for a receptacle 4 within which are a plurality of stacks of metallic alloy pellets 5. On a horizontal front position of base 1 are a plurality of registration holes 1* (FIG. 1), for selective registration with a latch pin 6 carried by a spring finger-piece 7 on stack holder 3.

At right angles to key-channel 2, is a slideway at 8 which receives a plunger 9, engaged by a spring 10. At channel 2 the slideway is open to expose the top of plunger 9 and hence a pellet-receiving opening at 11 therein.

By adjusting the stack holder, with its plural stack receptacle, to a desired position, in accordance with the thickness and hence volume of pellets in one of the stacks, repeated dispensing of said pellets can be effected by pushing the plunger inwardly to the position of FIG. 5, each time with a gravity fed pellet in the pellet receiving opening 11 of the plunger, whereupon the pellet will fall through a discharge opening at 12 in base 1.

To compensate for pellets of different thicknesses, the base member 1 is formed with a threaded aperture to receive screw 15, the latter having a handle 16. Inasmuch as the pellets are usually of two different thicknesses, the screw can be so threaded that when the handle

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is turned fully in one direction, as against a stop (not shown) the screw will be moved up to enable the plunger to receive a pellet of minor thickness without jamming of the plunger by dropping, part way, of an overlying pellet. Thus, turning of the handle fully in the opposite direction will cause the screw to descend to normal position.

At 17 is a box for mercury, having a cap 18, and an outlet at 19 which will communicate with a receiving orifice at 20 in the plunger, when the latter is moved inwardly to receive and discharge a pellet. Mercury in the box is indicated at M.

At 13 is an adjusting threaded stem for the mercury outlet, which may be used in conjunction with a gauge indicator shown at 14.

It will be understood that various modifications may be made in the form and arrangement of the elements shown in the illustrated embodiment, without departing from the spirit of the invention.

Having described my invention, what I desire and claim to secure by Letters Patent is as follows:

1. A dispenser for dental alloys and mercury, consisting of a base member, a reservoir for mercury supported by said base member and provided with an outlet, a guideway in said base member and extending longitudinally of the base member, a second guideway in said base member and extending transversely of the first guideway, a plunger movable longitudinally of said first guideway and movable to close said mercury outlet when in one position, and to uncover the outlet in another position, a holder for a plurality of stacks of metal alloy pellets movable longitudinally in said second guideway, said holder being open at its base, said plunger having a receiving passageway for a pellet, and the base member having a discharge passageway for mercury from said reservoir, and for pellets from the stacks of pellets carried by said stack holder, and means for registration of each of a plurality of stacks of pellets of the stack holder with the receiving passageway of said plunger.

2. A dispenser for dental alloys and mercury constructed in accordance with claim 1, in combination with a member adapted to be projected into the pellet receiving passageway, the plunger being formed with a clearance for said member, and means for moving said member into and out of the said pellet passageway.

3. A dispenser for dental alloys and mercury constructed in accordance with claim 1, in combination with means for controlling the pellet receiving depth of the passageway in the plunger and for controlling the distance of movement of the plunger in its action to uncover the outlet of the mercury reservoir, and consisting of a post-like member adapted to be entered into and out of the pellet receiving passageway, the plunger being formed with a clearance, and with a shoulder at one end of said clearance, for engaging the post-like member when the plunger is moved to a position uncovering the mercury outlet.

References Cited in the file of this patent

UNITED STATES PATENTS

780,680	Peterson et al. -----	Jan. 24, 1905
1,286,881	Gray -----	Dec. 3, 1918
1,605,832	Garhart -----	Nov. 2, 1926

FOREIGN PATENTS

757,435	Great Britain -----	Sept. 19, 1956
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