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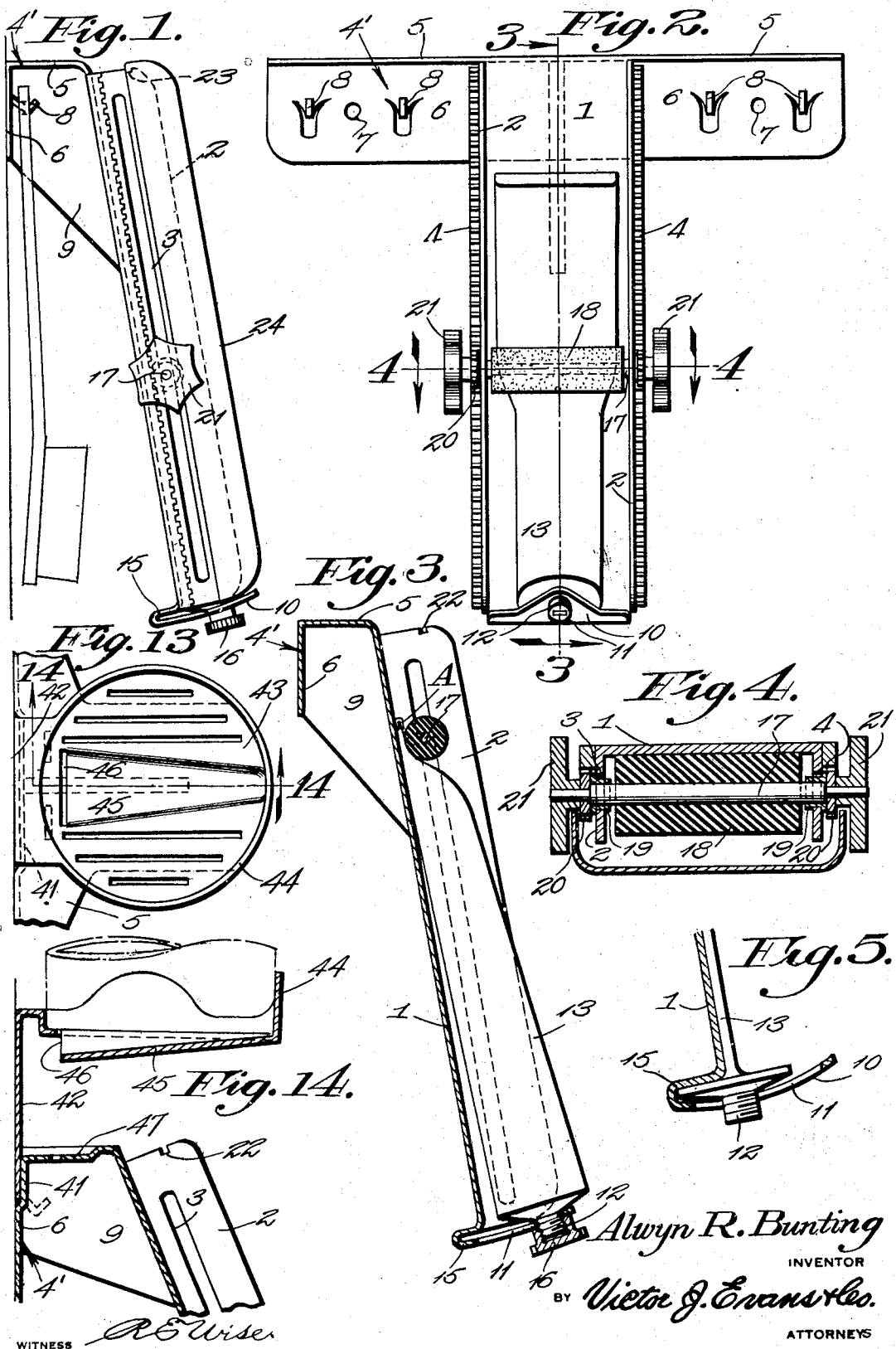
A. R. BUNTING

2,124,907

DEVICE FOR EXTRACTING CONTENTS FROM TUBES

Filed June 17, 1937

2 Sheets-Sheet 1



July 26, 1938.

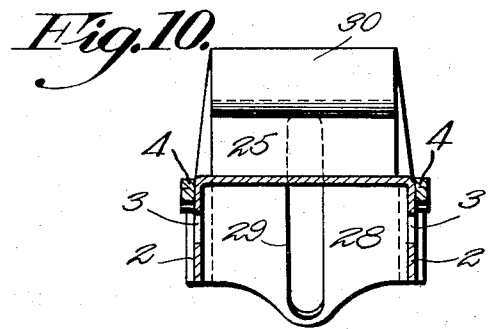
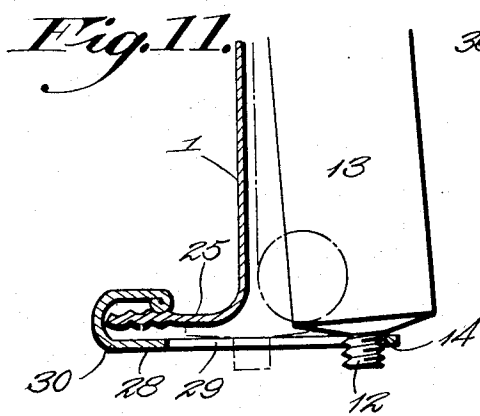
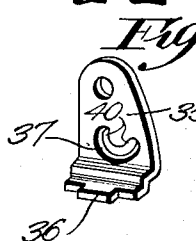
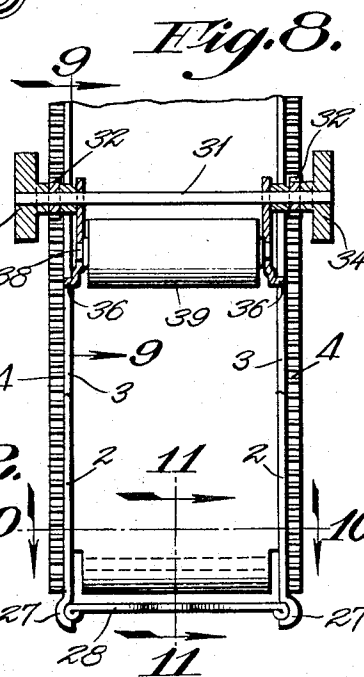
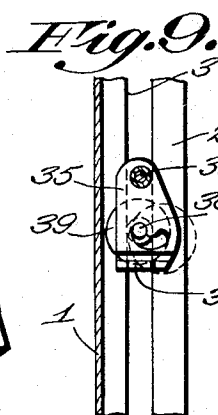
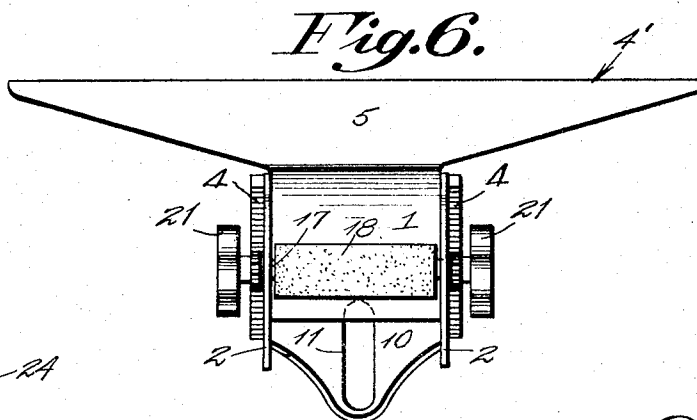
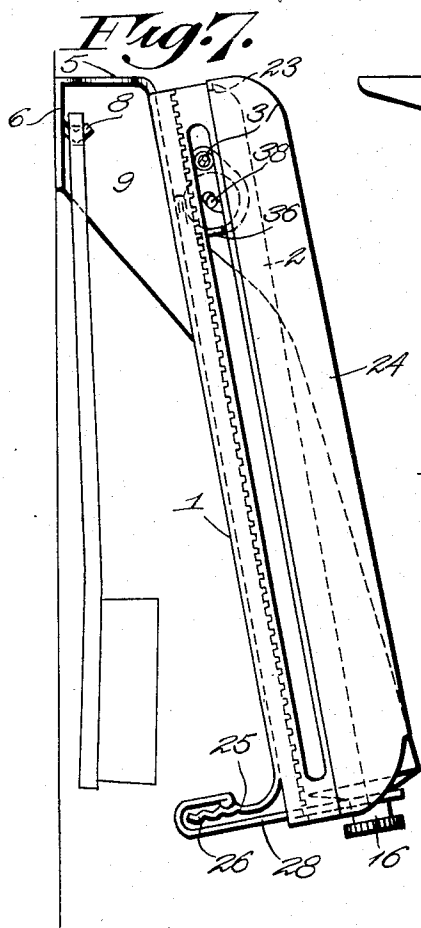
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DEVICE FOR EXTRACTING CONTENTS FROM TUBES

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2 Sheets-Sheet 2



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WITNESS

UNITED STATES PATENT OFFICE

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DEVICE FOR EXTRACTING CONTENTS
FROM TUBES

Alwyn R. Bunting, Portsmouth, Va.

Application June 17, 1937, Serial No. 148,799

3 Claims. (Cl. 221—60)

This invention relates to a device for dispensing dental or shaving creams or any other contents of collapsible tube type containers, and has for the primary object the provision of an efficient and inexpensive device of this character which may be easily and quickly operated to dispense the contents of a container in desired amounts and which is so constructed that the entire amount of the contents may be dispensed from the container, eliminating waste and the device further will permit easy and quick application or removal of the container therefrom and provides a support and a protector for the container.

With these and other objects in view, this invention consists in certain novel features of construction, combination and arrangement of parts to be hereinafter more fully described and claimed.

For a complete understanding of my invention, reference is to be had to the following description and accompanying drawings, in which

Figure 1 is a side elevation illustrating a dispensing device constructed in accordance with my invention.

Figure 2 is a front elevation illustrating the same.

Figure 3 is a sectional view taken on the line 3—3 of Figure 2.

Figure 4 is a sectional view taken on the line 4—4 of Figure 2.

Figure 5 is a fragmentary vertical sectional view showing a portion of the discharge end of a collapsible tube container supported by the device after complete dispensing of the contents.

Figure 6 is a top plan view illustrating the device.

Figure 7 is a side elevation illustrating a modified form of my invention wherein means is provided for accommodating containers of different sizes.

Figure 8 is a fragmentary vertical sectional view illustrating a modified form of my invention.

Figure 9 is a sectional view taken on the line 9—9 of Figure 8.

Figure 10 is a sectional view taken on the line 10—10 of Figure 8.

Figure 11 is a sectional view taken on the line 11—11 of Figure 8.

Figure 12 is a perspective view illustrating one of the carriage plates for the roller of my modified form of invention.

Figure 13 is a top plan view illustrating a tumbler holder adaptable to the dispensing device.

Figure 14 is a sectional view taken on the line 14—14 of Figure 13.

Referring in detail to the drawings, the numeral 1 indicates an elongated squeeze plate

having formed on opposite edges thereof the side walls 2 provided with elongated slots 3. Rack bars 4 are secured to the side plates, and arranged adjacent the slots 3. Integral with one end of the squeeze plate 1 is a bracket 4' including angularly related portions 5 and 6. The portion 6 has openings 7 through which fasteners may pass for securing the bracket to a wall or like support. Also formed on the portion 6 are hooks 8 on which may be suspended toothbrushes. The shapes of the hooks 8 are such that the toothbrushes will be supported outwardly from the wall or like support. Connecting the angularly related portions 5 and 6 are bracing strips 9. The squeeze plate 1 is supported in a downward and outward direction with respect to the support or wall, as clearly shown in Figure 1.

A bottom plate 10 is provided on the squeeze plate 1 and extends at right angles thereto and has formed therein a slot 11 to receive the screw threaded discharge neck 12 of a container 13 of the collapsible tube type. One of the end walls of the slot 11 is beveled, as shown at 14, to engage in the screw threads of the discharge neck 12 for resisting upward movement of the container during a squeezing operation thereon and which will be hereinafter more fully described.

The bottom plate 10 is spaced a limited distance below the lower end of the squeeze plate 1 and its connection with the squeeze plate forms an offset 15 in which the neck end of the container 13 may pass when said container is fully collapsed, as shown in Figure 5. The portion 5 of the bracket 4 forms a rest or shelf on which the cap 16 of the container may be placed when removed from said container. The container 13 is arranged on the squeeze plate and the bottom plate in an inverted position, that is, with the tail end disposed uppermost. The tail end is indicated by the character A.

A shaft 17 extends through the slots 3 and has secured thereon a squeeze roller 18 preferably constructed of cushioning material such as rubber. Sleeve journals 19 are arranged on the shaft 17 to contact walls of the slots 3. Pinions 20 are secured on the shaft 17 and mesh with the rack bars, and finger pieces 21 are secured on the ends of the shaft.

The upper ends of the side plates 2 have notches 22 to be engaged by projections 23 formed on one end of a cover 24. The cover overlies the container positioned on the squeeze plate with its lowermost end engaging the lowermost ends of the side plates with the bottom plate 10 arranged exteriorly of the lowermost end of the cover.

In operation, the roller 18 is positioned at the upper ends of the slots 3 and a container

is positioned on the squeeze plate 1 and the bottom plate 10 with the screw threaded neck 12 thereof extending through the slot 11 in the bottom plate. The screw threads of the neck are brought into engagement with the beveled wall of the slot which will resist any upward movement of the container on the squeeze plate 1 when first engaged by the roller. After the positioning of the container on the squeeze plate as described the roller is brought over the end A of the container and by rotating the finger pieces the roller is caused to travel in a downward direction forcing or collapsing the container against the squeeze plate which brings about expelling of the contents of the container by way of the discharge neck 12. It is to be understood that the cap 16 is removed from the neck before rotating the finger pieces to bring about the squeezing operation. As the contents are substantially removed from the container by the downward travel of the roller the container assumes a flattened position, as shown in Figure 5, with the discharge end lying partly in the offset 15 of the bottom plate. The container being permitted to move towards the squeeze plate during the final expelling of the contents permits the container to be flattened throughout its length so as to assure the complete expulsion of the contents of the container. The distance the roller is advanced along the squeeze plate governs the amount of the contents expelled from the container.

Referring to my modified form of invention the squeeze plate, side walls and slots thereof and the bracket are the same as described in connection with the first form of the invention. In the modified form of the invention the lower end of the squeeze plate has formed thereon a right angularly disposed extension 25 having a series of corrugations 26. The lower ends of the side plates are offset to form guides 27 to slidably receive a removable bottom plate 28, the slot 29 thereof being constructed similarly to the slot 11. A hook-shaped extension 30 is formed on the bottom plate to engage with the corrugations 26 of the extension 25 for adjusting the position of the bottom plate on the squeeze plate so as to accommodate containers of different sizes. The extension 30 by pressure thereon may be flexed so as to permit it to be adjusted from one corrugation to another.

In the modified form of my invention a shaft 31 extends through the slots 3 and the pinions 32 thereof mesh with the rack bars on the squeeze plate. The pinions 32 are secured to the shaft 31 as well as the finger pieces 34. Roller carriage plates 35 are journaled on the shaft 31 and are provided with projections 36 engageable with the walls of the slots 3. Arcuately curved pintle slots 37 are formed in the plates 35 to receive pintles 38 of a roller 39. The roller in this instance is made of a hard substance such as metal. The slots 37 permit the roller to adjust itself towards and from the squeeze plate. The slots 37 being curved form projections 40 which aid in maintaining the pintles at either end of the slots. The purpose of mounting the pintles 38 in the slots 37 is to permit the hard roller 39 to readily pass over the tail end of a container positioned on the squeeze plate and as

said roller is advanced in a downward direction the pintles move to one end of the slots 37 or the ends in the direction of the squeeze plate, the projections 40 acting to retain the pintles in said ends of the slots so as to bring about an efficient squeezing action of the roller on the container to expel its contents.

The portion 6 of the bracket 4 may be provided with an offset 41 to removably receive one end of a bracket 42, the other end of the bracket being integral with a plate-like member 43. The plate-like member has upstanding flanges 44 to form a tumbler rack or holder. A portion of the plate 43 is offset, as shown at 45, and a slot 46 is provided at one end of the offset. The offset 45 forms a trough for draining from the plate condensation or water onto the portion 5 of the bracket. The portion 5 may be recessed, as shown at 47, to catch the drippings from the trough 45.

Having described the invention, I claim:

1. A dispensing device comprising a squeeze plate, a bracket for supporting said plate in a depending position, a bottom plate carried by the squeeze plate and having a slot to receive the discharge neck of a container resting against the squeeze plate, one wall of the slot of the bottom plate being beveled to engage screw threads of the neck to resist upward movement of the container, side plates formed on the squeeze plate and having slots, a shaft extending through the slots, finger pieces secured on the shaft, rack bars secured to the side plates, pinions secured on the shaft and meshing with the rack bars, carriage plates journaled on the shaft and having curved pintle slots, projections formed on said plates and extending into the slots of the side plates, pintles received by the pintle slots, and a roller secured on said pintles.

2. A dispensing device comprising a squeeze plate, means for supporting said plate in a substantially vertical position, a corrugated extension formed on said squeeze plate, side plates formed on the squeeze plate, a bottom plate slidably mounted on the side plates at the lower end of the squeeze plate and having a slot to receive a discharge neck of a container resting against the squeeze plate, a hook-shaped extension formed on the bottom plate to engage with the corrugations for adjustably securing the bottom plate onto the squeeze plate to accommodate containers of different sizes, said extension of the squeeze plate and the hook-shaped extension of the bottom plate cooperating in forming a space for the reception of a portion of the container after being substantially collapsed throughout its length.

3. A dispensing device comprising a squeeze plate, a bracket for supporting said plate in a depending position, a bottom plate carried by the squeeze plate and having a slot to receive a discharge neck of a collapsible container resting against the squeeze plate, said bottom plate having an offset to provide a space at the lower end of the squeeze plate to receive a portion of the container adjacent the neck thereof after squeezing of said container, and means movably supported on the squeeze plate to squeeze the container.

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