

PATENT EXAMINATION BOARD

DRAFTING OF PATENT SPECIFICATIONS – GROUP 2(e)

Supplementary - Paper 1

November 2023

Examiner: V Williams

Moderator: J Whittaker

Time: 6 hours

Total marks: 100

This paper consists of 12 pages (including this cover page)

Question 1

Your client hands you the following description and drawings of his invention:

I have developed a “size-shifter” spanner that overcomes the need to have a set of conventional spanners of varying sizes to cover a range of nuts having different dimensions. An example of a conventional spanner is shown in the photograph below.

Prior Art



My “size-shifter” spanner is shown in the attached drawings (see pages 4 to 7 below), wherein:

Fig. 1 is a top view of my “size-shifter” spanner;

Fig. 2 is a top perspective view of the spanner;

Fig. 3 is a bottom view of the spanner;

Figs. 4 and 5 are end and side views respectively of my “size-shifter” spanner;

Fig. 6 is an exploded perspective view of components of the spanner; and

Figs. 7 and 8 are perspective views of the spanner in a partially assembled condition.

*With reference to Figs. 1 and 3 of the drawings, the “size-shifter” spanner **1** comprises an L-shaped stationary jaw **2** which is couplable with an L-shaped movable pincer **3** in a plurality of different positions via an adjustable coupling **4** arranged on the jaw **2** and the pincer **3**, to permit a nut **7** of different sizes to be clamped between the jaw **2** and the pincer **3**.*

*Referring also to Fig. 2, a cover **5** is fixed to the stationary jaw **2** with fasteners which will be described in more detail below. The cover **5** includes a lip **6** which extends over the pincer **3** to hold this pincer and the stationary jaw **2** substantially in the same plane (see, for example, Figs. 2 and 8 of the drawings). This feature is particularly important and advantageous because it allows the spanner **1** to have an overall thickness comparable with the prior art spanner.*

*As shown in Fig. 8, the cover **5** has an outer profile **9** which follows an external edge portion **10** of the stationary jaw **2** to define a handle portion **11** (see also Fig. 3). The handle portion **11** allows a user to comfortably hold the spanner **1** when tightening and/or loosening the nut **7**. The cover **5** and the stationary jaw **2** include a widening, defined by a step **12** in the cover (see Fig. 6) and a corresponding step **12A** in the stationary jaw **2** (see Fig. 3) for abutment of the hand of the user when holding the handle portion **11**. With reference to Fig. 6 of the drawings, the cover **5** defines four holes **13**, and the stationary jaw **2** defines four corresponding holes **14** which are aligned with the holes **13** when the stationary jaw **2** and the cover **5** are brought together for fastening. These components are fastened together by rivets **15** (see Fig. 3) which extend through the aligned holes **13** and **14**.*

*The adjustable coupling **4** comprises a first toothed rack **16** provided along an edge **17** of the stationary jaw **2**, and a second toothed rack **18** provided along an edge **19** of the pincer **3**. The second toothed rack **18** is engageable with the first toothed rack **16** so as to form an adjustable gap between an end portion **2A** of the stationary jaw **2** and an end portion **3A** of the pincer **3**.*

A sleeve 22 is provided (see Figs. 1 and 2) for holding the pincer 3 against the stationary jaw 2 in a desired position depending on the size of the nut 7.

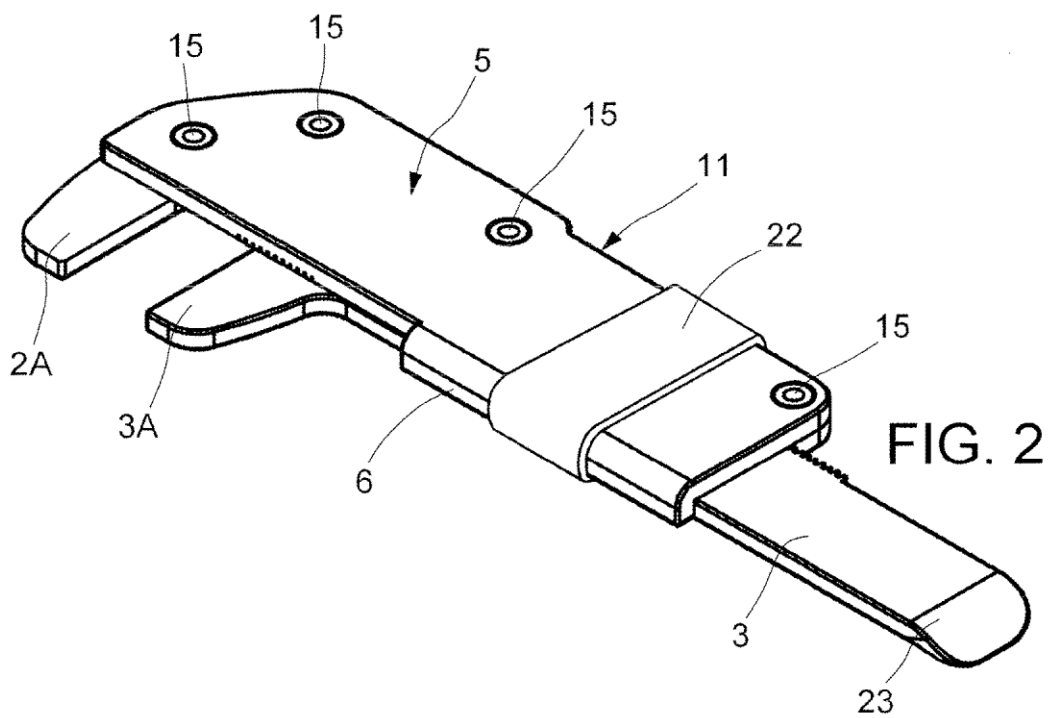
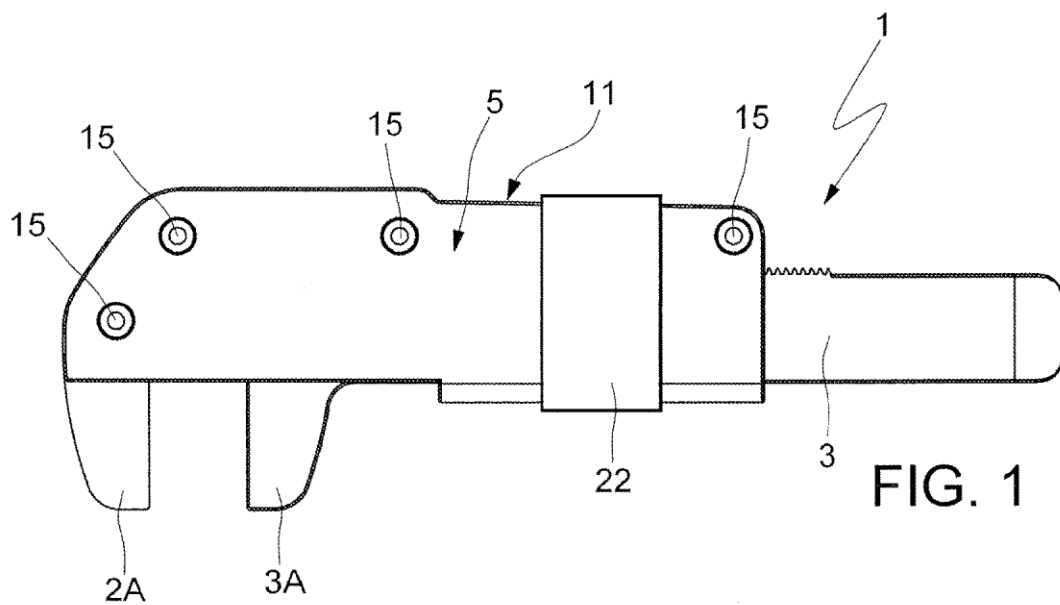
In use, the width of the adjustable gap may easily be increased or decreased to accommodate differently sized nuts by removing the sleeve 22, disengaging the pincer 3 from the stationary jaw 2 by sliding the toothed rack 18 away from the cover 5 and out of engagement with the toothed rack 16 into the position illustrated in Fig. 7, displacing the pincer 3 lengthwise relative to the stationary jaw 2, inserting the pincer 3 back into engagement with the stationary jaw 2 by sliding the toothed rack 18 towards the cover 5 and into engagement with the toothed rack 16, and replacing the sleeve 22. The spanner 1 may then be used to engage a nut, which may be larger or smaller than the nut 7, between the end portions 2A and 3A.

The cover 5 may include a measuring scale 25 on its internal surface (see Fig. 3) for indicating the size of the adjustable gap between the end portions 2A and 3A. In this way, a user may select a precise size for the adjustable gap to fit a particular nut to be engaged.

I also thought it useful to include a tire lever extremity 23 on the pincer 3 for facilitating the removal of a bicycle tire (not shown) from a wheel rim (also not shown).

The coolness factor of my “size shifter” spanner 1 is that it can replace a whole set of spanners. It is also relatively simple and practical to use, with increases and decreases in the size of the adjustable gap being relatively quick and easy to effect. The spanner 1 is also simple and reasonably cheap to manufacture since the main components may be formed in a stamping process.

The candidate is required to identify the inventive feature(s) of the invention, and to draft up to three claims to protect the above invention.



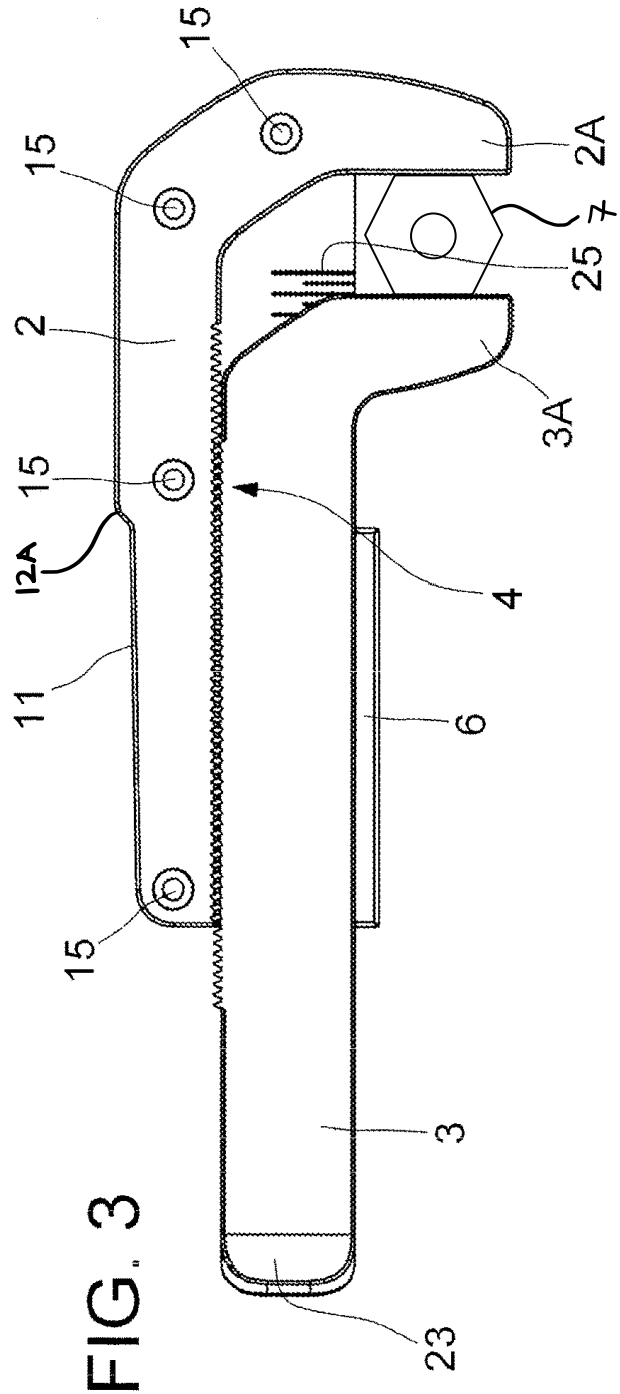


FIG. 3

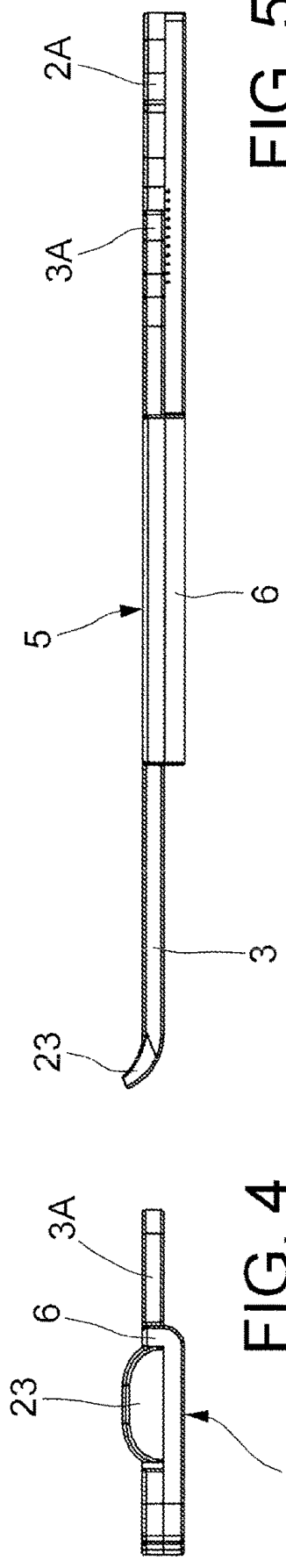


FIG. 4

FIG. 5

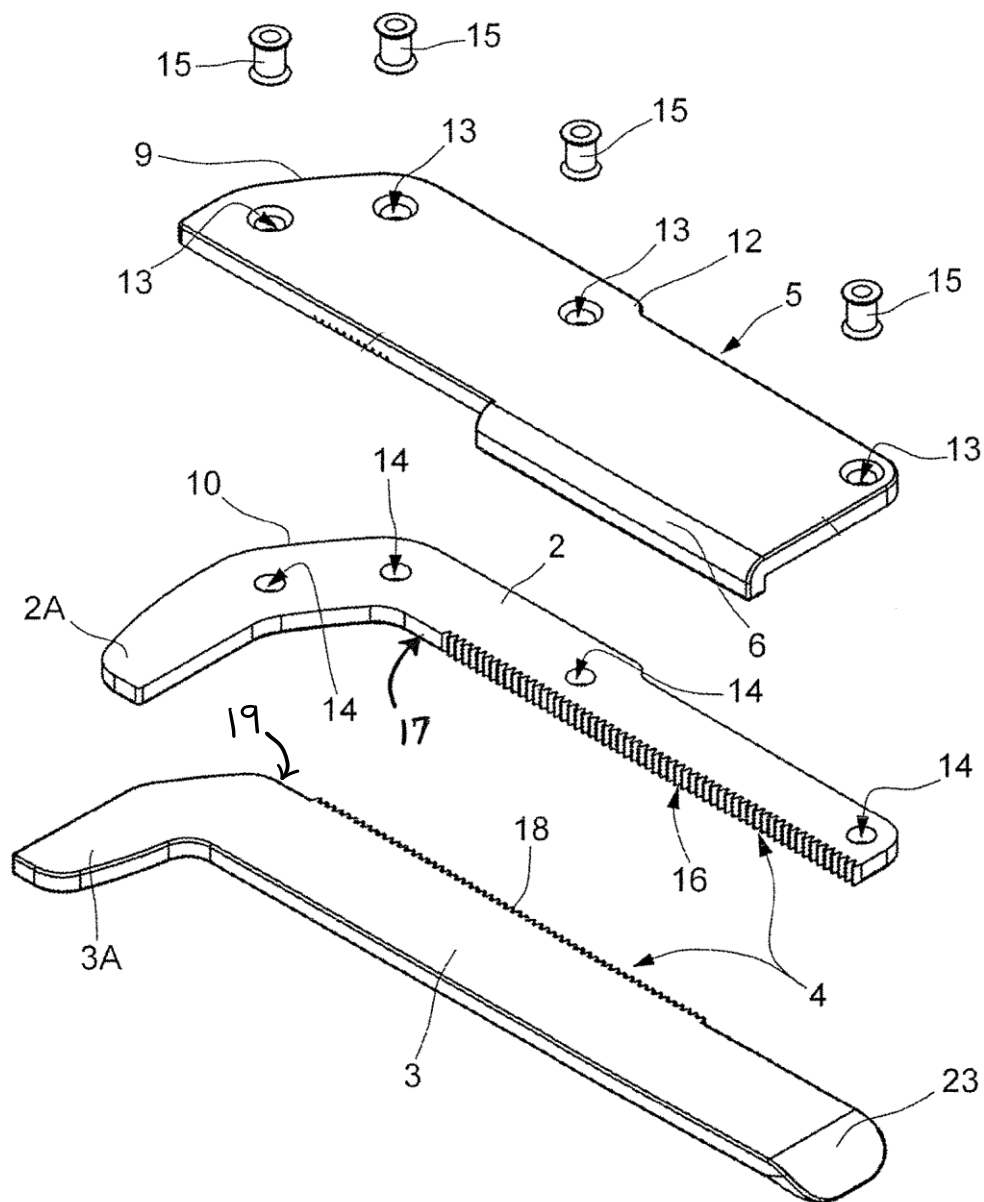
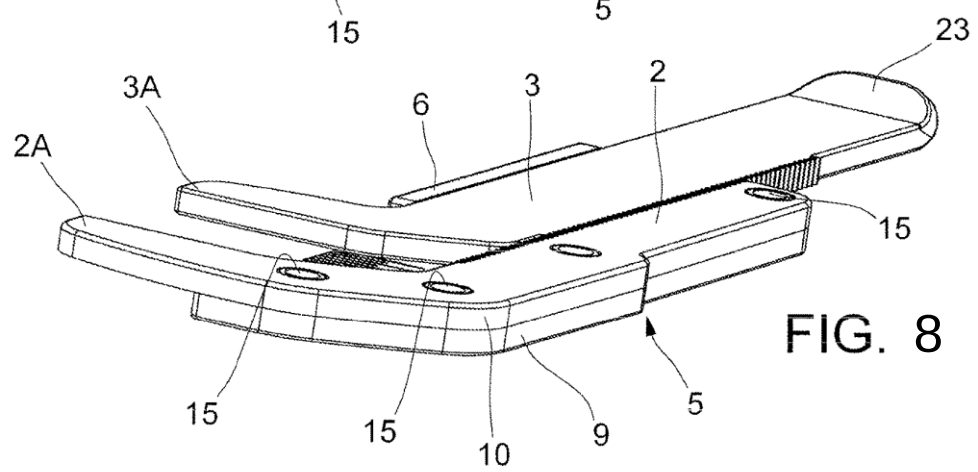
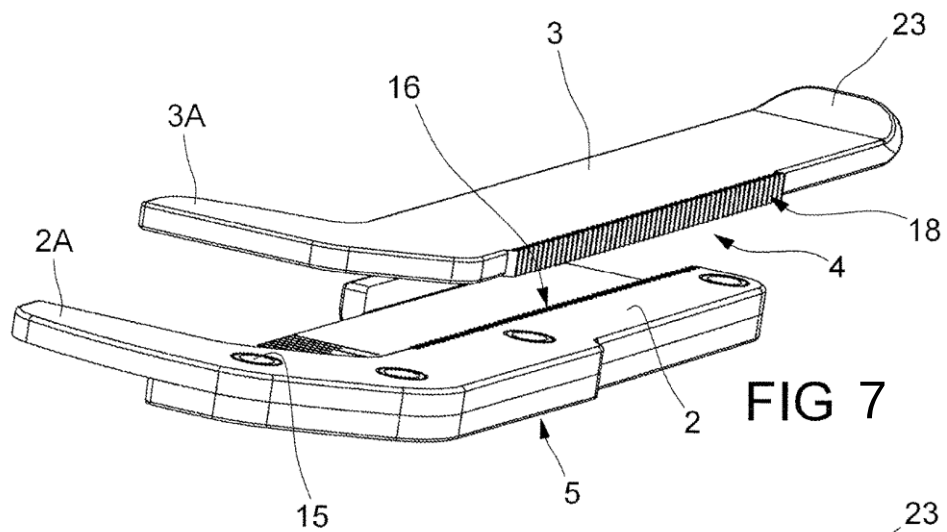


FIG. 6



Question 2

Your client hands you the following detailed description of her new stamp licking invention.

Due to the unpleasant taste of adhesive coatings placed upon postage stamps, envelopes and the like, many persons using such articles dislike licking the coating with their tongue, or object to licking the coating for reasons of health and sanitation. Although a moistened cloth or sponge may be used to avoid licking such adhesive coatings, cloths or sponges become dry and have to be re-moistened more often than is convenient.

I have developed a device which may be used to moisten an adhesive coating on a postage stamp or the like, and attach drawings of my device below (see pages 11 and 12), wherein:

FIG. 1 is a perspective view of my device in a rest position;

FIG. 2 is a perspective view of the device of FIG. 1 depicting the depression of an actuator and the extension of a tongue-like moistening member from the device;

FIG. 3 is an elevational view, partially in cross section, of the interior of the device;

FIG. 4 is a cross-sectional view taken along the line 4-4 in FIG. 1;

FIG. 5 is a cross-sectional view taken along the line 5-5 in FIG. 4;

FIG. 6 is a cross-sectional view taken along the line 6-6 in FIG. 4;

FIG. 7 is a cross-sectional view depicting the tongue-like moistening member within the device; and

FIG. 8 is a cross-sectional view taken along the line 8-8 in FIG. 2 depicting the tongue-like moistening member extending from the device.

With reference to FIG. 1 of the drawings, a box-like enclosure 10 is shown with a closure member 12 configured to resemble the upper lip of a pair of human lips. An actuator 14 having an enlarged button 16 and a cylindrical extension 18 extends through the top of the enclosure 10 for reciprocal movement in and out of the enclosure 10.

FIG. 2 shows the enclosure 10 with the actuator 14 depressed under pressure from a human finger 20. When the actuator 14 is depressed, the closure member 12 is moved from a first position illustrated in FIG. 1 to a second position illustrated in FIG. 2 thereby exposing an opening 22 through which a moistening member 24 shaped like a human tongue extends. The tongue-like moistening member 24 contains an upper surface 25 which is formed of an absorbent sponge-like material capable of absorbing and retaining moisture.

As shown most clearly in FIGS. 3 and 4, the lip-like closure member 12 has a backup plate 28 rigidly secured to the closure member 12 by pins 30. The backup plate 28 extends vertically above and horizontally beyond the limits of the opening 22. This opening 22 has curved upper portions 32 and 34 above the pins 30 to permit extended upward travel of these pins. A pair of guides 36 runs vertically on either side of the backup plate 28 to help guide movement of the backup plate.

A lip configuration 40 is rigidly attached to the enclosure 10 beneath the opening 22 by pins 42. This lip configuration serves to simulate a lower lip to pair with the upper lip configuration of the closure member 12.

FIGS. 4 and 5 depict the moistening member 24 in a first position disposed within a liquid 44, which is preferably water. The water 44 is contained within a drawer-like liquid container 46. The container 46 is slidable into and out of the enclosure 10, and for this purpose includes a handle 47.

The moistening member 24 is suspended from a linkage 48 by pivot pins 50 on each side of the member 24 (see FIGS. 5 and 6), and the linkage 48 includes lateral extensions 52 which project into holes within enclosure partitions 54 (see FIG. 5). As shown in FIG. 6, the linkage 48 also has a pair of spring connecting elements 56 projecting outwardly in parallel relationship with the pins 50 and the lateral extension 52. Extension springs 58 are connected to the enclosure 10 at one of their ends and to the spring connecting elements 56 at the other of their ends to urge the linkage 48 into a predetermined angular position which is illustrated in FIG. 4.

The actuator 14 engages a plunger 60 which has lateral projections (not shown) guided for reciprocal vertical displacement in slots 62 (see FIGS. 4, 7 and 8) in the enclosure partitions 54. The rear portion of the plunger 60 includes a cylindrical member 64 which is guided through an opening in a bracket 66 extending from the rear wall of the enclosure 10. During a first portion of downward displacement of the plunger 60, the cylindrical member 64 engages a portion 68 of the moistening member 24 to rotate the moistening member 24 about the axis of the pins 50, thereby to lift the moistening member 24 out of the water 44. Continued downward displacement of the plunger 60 moves the linkage 48 and the moistening member 24 to the position illustrated in FIG. 7 where the moistening member 24 is urged against an inclined surface 70 of an abutment 72 secured to the closure member backup plate 28. This interaction urges the closure member 12 upwardly and permits the moistening member

24 to extend outwardly from the enclosure 10 as the linkage 48 is pivoted further about the lateral extensions 52. The extended position is illustrated in FIG. 8.

In operation, when it is desired to moisten a postage stamp or the like, a user depresses the button 16 on the actuator 14 to displace the plunger 60 downwardly, causing rotation of the linkage 48 about the pivot axis of the extensions 52 against the bias of the extension springs 58. During the initial portion of this downward displacement, the cylindrical member 64 engages the portion 68 of the moistening member 24 causing the moistening member 24 to rotate about the axis of the pins 50 from the orientation illustrated in FIG. 4 to an orientation similar to that depicted in FIG. 7. Continued downward displacement of the plunger 60 rotates the linkage 48 to urge the moistening member 24 against the inclined surface 70 of abutment 72 driving the closure member 12 upwards and exposing the opening 22, as shown in FIG. 7. The moistening member 24 is then extended through the opening 22 and out of the enclosure 10 by camming engagement between the plunger 60 and the linkage 48 as the plunger 60 is displaced further downwards into the position illustrated in FIG. 8.

When the actuator 14 is released, the extension springs 58 urge the linkage 48 back into the position illustrated in FIG. 4.

The candidate is required to identify the inventive feature(s) of the invention, and to draft up to three claims to protect the above invention.

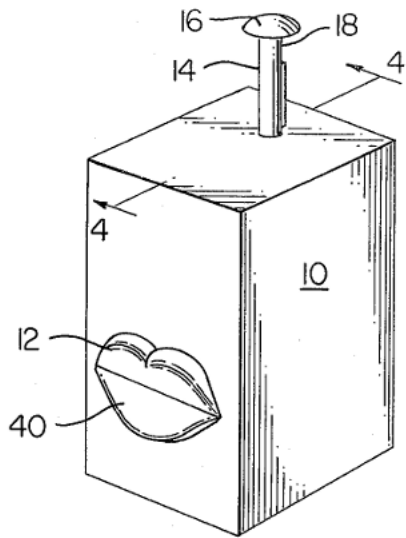


FIG. 1

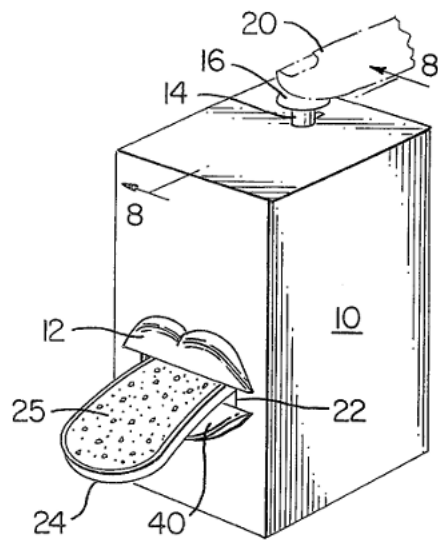


FIG. 2

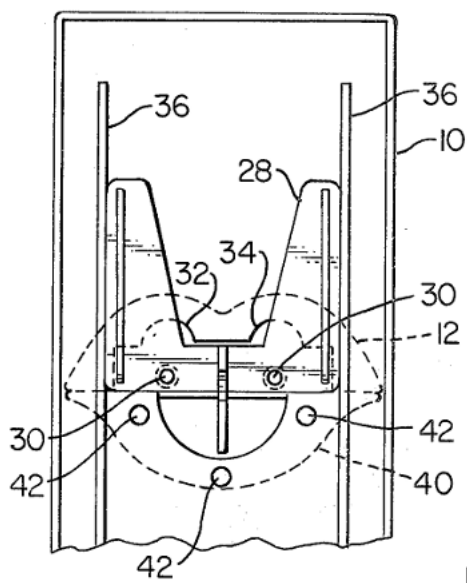


FIG. 3

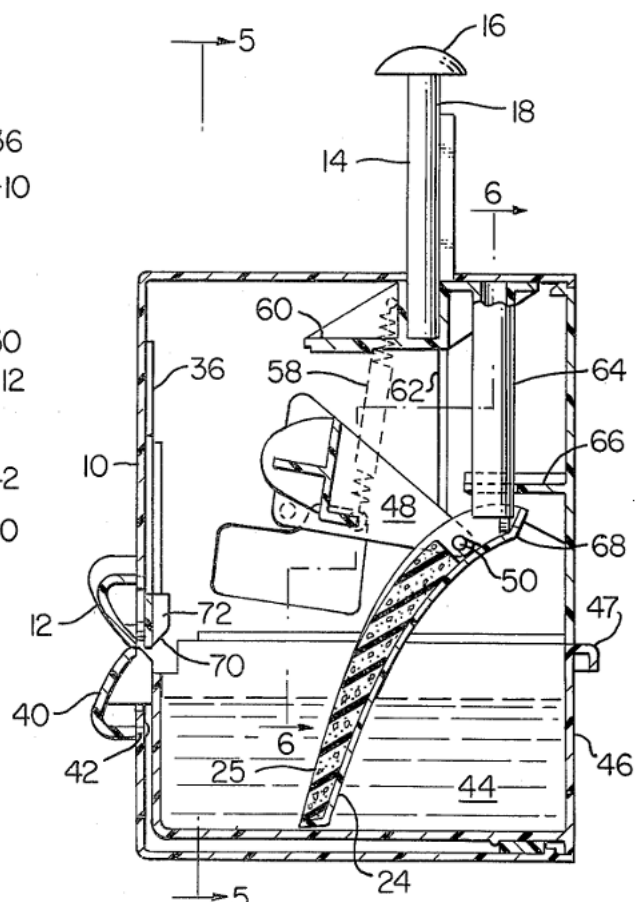


FIG. 4

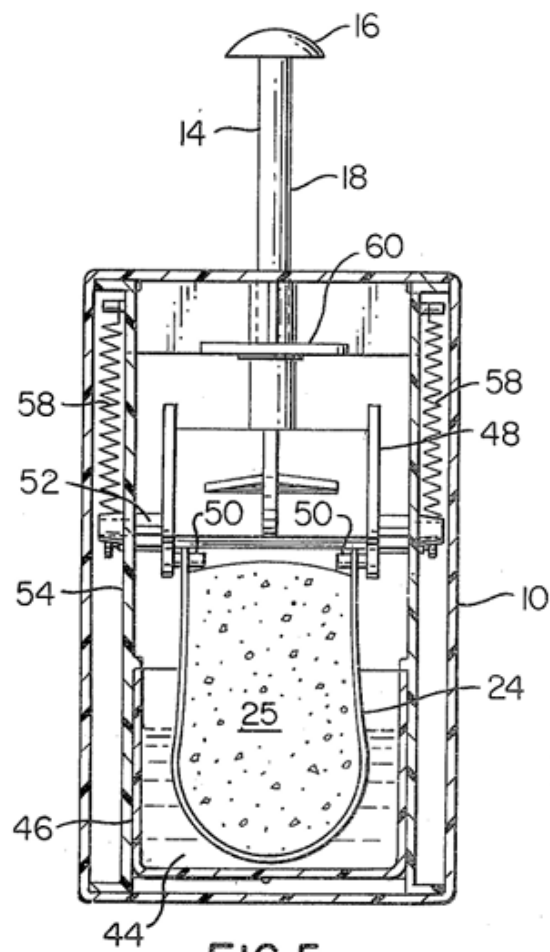


FIG. 5

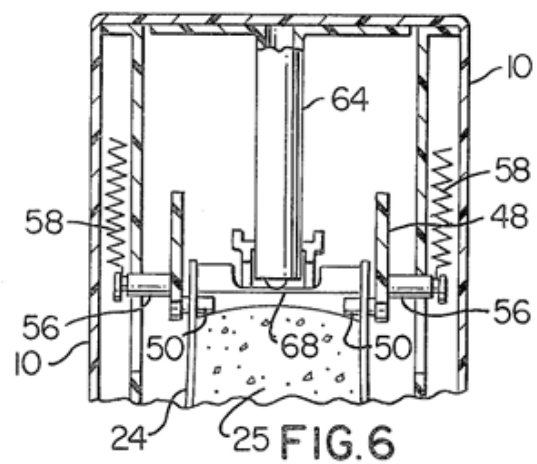


FIG. 6

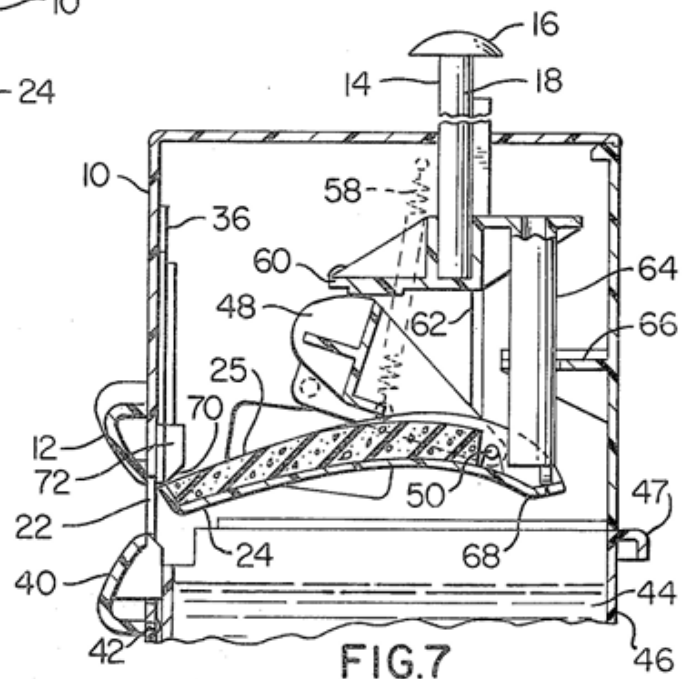


FIG. 7

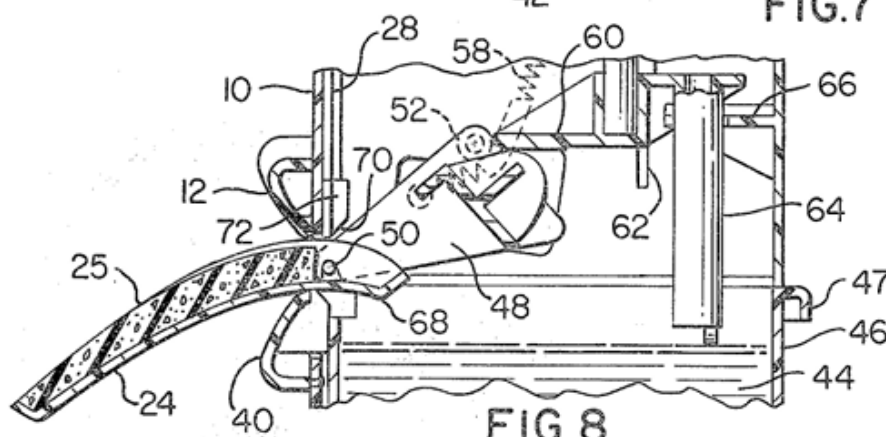


FIG. 8