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**Holding means for inserts**

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(71) Applicant(s)  
**Stuart Monteith**

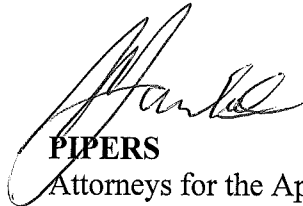
(72) Inventor(s)  
**Monteith, Stuart Hamilton**

(74) Agent / Attorney  
**PIPERS, Middletons Level 25, Rialto South Tower 525 Collins Street, Melbourne, VIC, 3000**

**ABSTACT**

5 A cleaning implement assembly, includes a handle and insert having cleaning means. The  
insert comprises an insert receiving recess adapted to slidably receive an interchangeable  
insert. The assembly has a locking means adapted to enable the insert to be removably held  
in the insert receiving recess. The locking means includes a snap fitting type tab in a recess  
arrangement. A method of assembling the cleaning implement is also included.

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15 **PIPERS**  
Attorneys for the Applicant  
**MONTEITH, Stuart Hamilton**

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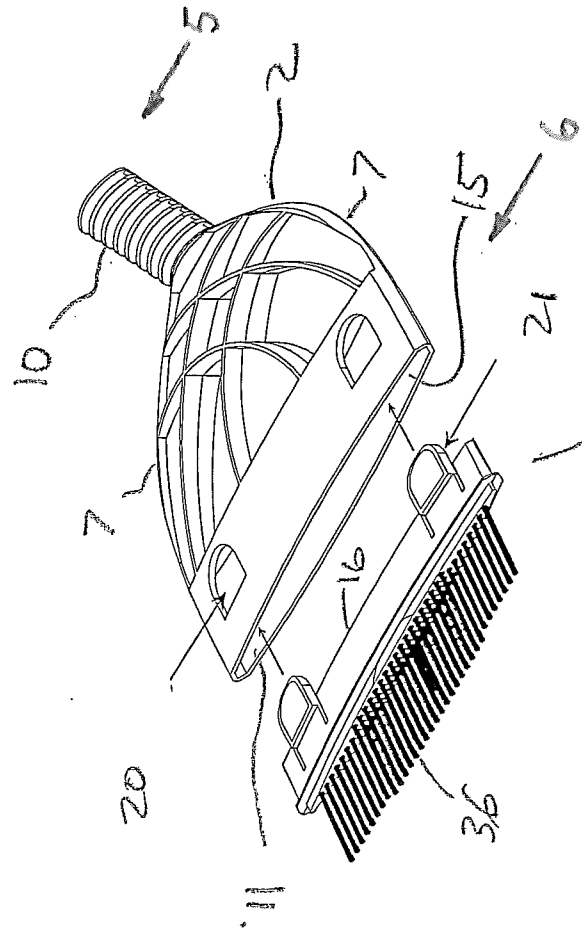
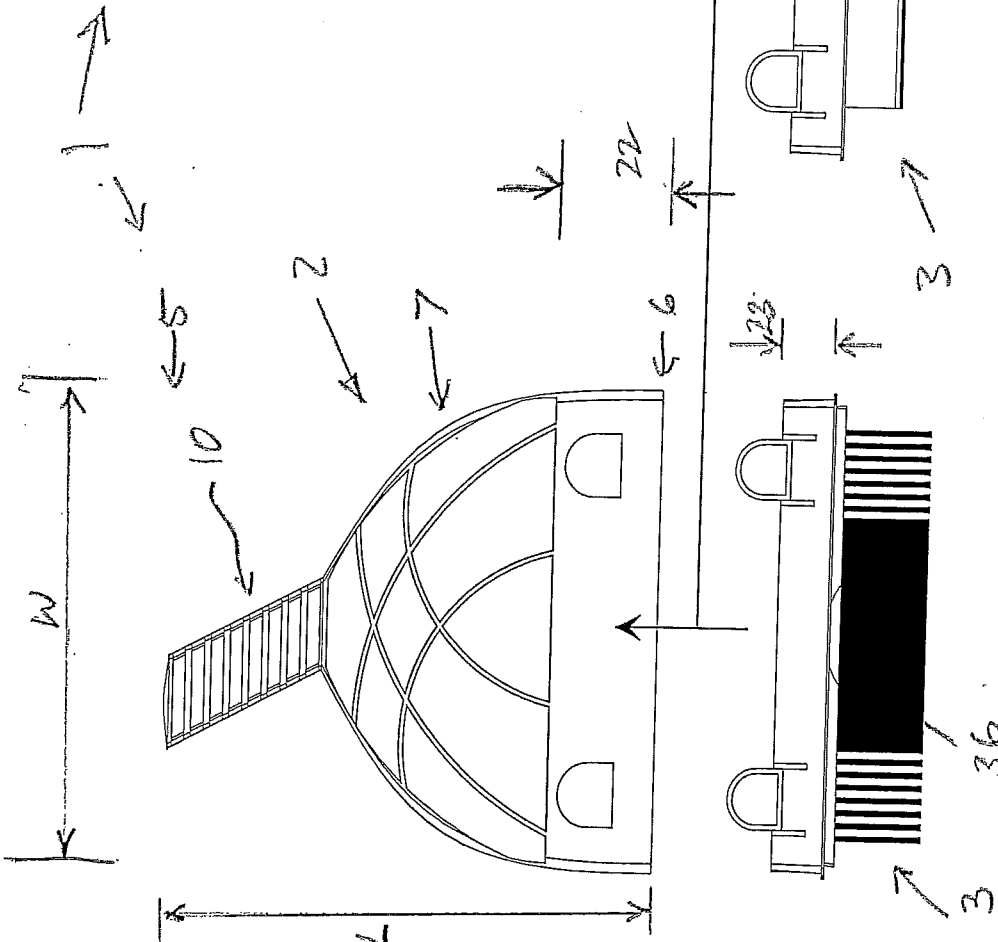
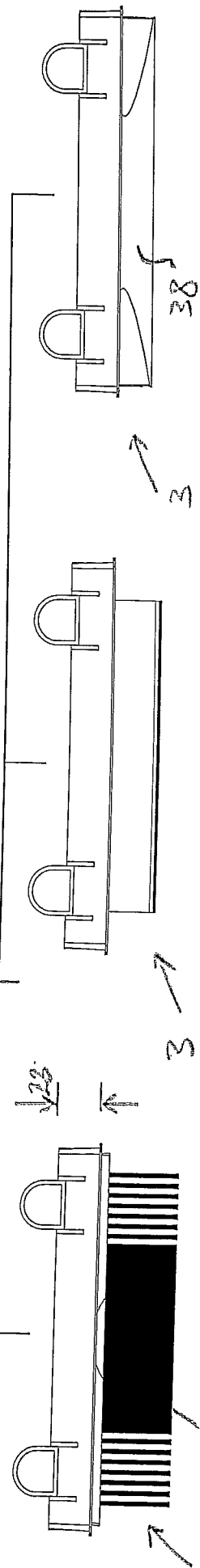


FIGURE 2



(a)



(b)

(c)

FIGURE 1

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Patents Act 1990

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## **COMPLETE SPECIFICATION**

**Intention Title: HOLDING MEANS FOR INSERTS**

The following statement is a full description of this invention, including the best method of performing it known to me:

### ***Holding means for inserts***

The invention relates to a holding means for a cleaning insert or cleaning implement assembly and to a method of assembly. The invention is directed particularly but not solely towards a handle for a cleaning implements such as a brush or mop or spatula for use in the office or the household.

#### **Background of Invention**

Problems occur in many work areas in households or work places in trying to perform tasks using various implements, tools or gadgets for cleaning or scraping or cutting. With the need for so many gadgets normally there can be the hassle in attempting to fix the gadget to a wall in the first place. Just placing the brush in a cupboard can make looking and locating such an object very tedious.

Space is always a problem especially in any confined and heavily used offices or the kitchens. Human nature is such that if it is not in the room of use like a kitchen or office, it is not handy so the task may never get carried out.

In this specification unless the contrary is expressly stated, where a document, act or item of knowledge is referred to or discussed, this reference or discussion is not an admission that the document, act or item of knowledge or any combination thereof was at the priority date, publicly available, known to the public, part of common general knowledge; or known to be relevant to an attempt to solve any problem with which this specification is concerned.

#### **Object of the Invention**

It is an object of the invention to provide an improved holding means for inserts and cleaning implement assembly and method of assembly that ameliorates some of the disadvantages and limitations of the known art or at least provide the public with a useful choice.

#### **Summary of Invention**

In a first aspect the invention resides in a holding means for inserts, the holding means includes a body having a handle portion and insert receiving means, the insert receiving

means comprises an insert receiving recess adapted to slidably receive at least one insert and locking means adapted to enable the said insert to be removably held therein the insert receiving recess.

- 5 Preferably, the holding means has ends and sides, the handle portion is located at an opposite end to the insert receiving recess.

Preferably, the insert locking means is located between the handle portion and insert recess.

- 10 Preferably, the locking means includes a locking recess of the handle portion is adapted to in use receive a complementary locking means of an insert wherein the locking means interfits with the recess in a snap fitting arrangement and the locking means is a tab member.

Preferably, there are two insert recesses for two tab members.

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Preferably, the holding means body is shaped having the handle portion being elongate handle portion and the body then fans outwardly in a curved manner to form or include the insert receiving recess.

- 20 Preferably, the inserts can be selected from a brush insert, a mop insert, and squeegee insert.

Preferably, the holding means can be fabricated from a plastics material.

- 25 Preferably each locking means of the holding means includes a specially shaped recess adapted to snap fittedly receive a complementary shaped tab as provided on/with the insert.

- In a **second aspect** the invention resides in a cleaning implement assembly, the assembly includes a holding means and insert with cleaning means, the holding means includes a body with sides and ends, having a handle portion and insert receiving means, the insert receiving  
30 means comprises a insert receiving recess adapted to slidably receive at least one insert and locking means adapted to enable the said insert to be removably held therein the insert receiving recess,

each insert includes a body having a protruding end with an insert locking means and an operating end including the cleaning means wherein the protruding end is shaped and adapted to inter-fit with the insert receiving recess and be removably locked in place by the locking means of the insert also interfitting with the locking means of the holding means  
5 whereby the operating means protrudes from the insert holding assembly and is located at that opposite end to the handle portion.

Preferably, the holding means has ends and sides, the handle portion is located at an opposite end to the insert receiving recess.  
10

Preferably, the insert locking means is located between the handle portion and insert recess.

Preferably, the locking means includes a locking recess adapted to in use receive a complementary locking means attached to or formed as part of the insert.  
15

Preferably, the locking means functions as a snap fitting arrangement.

Preferably, there are two locking recesses for two tab members.

20 Preferably, the holding means body is shaped having the handle portion being elongate handle portion and the body then fans outwardly in a curved manner to form the insert receiving recess.

Preferably, the cleaning means can be selected from a brush fitting, a mop fitting, and  
25 squeegee fitting.

Preferably, the holding means can be fabricated from plastics material.

Preferably each locking means of holding means includes a specially shaped recess adapted  
30 to snap fittedly receive a complementary shaped tab as provided on/with the insert.

Preferably the insert can be fabricated as a one piece body or as two halves that clamp the cleaning means there between.

In a **third aspect** the invention resides in a method of assembling inserts in an insert holding means to form the cleaning implement assembly, the assembly includes a holding means and insert having cleaning means, the holding means includes a body with sides and ends, having  
5 a handle portion and insert receiving means, the insert receiving means comprises an insert receiving recess adapted to slidably receive at least one insert and locking means adapted to enable the said insert to be removably held therein the insert receiving recess, each insert includes a body having a protruding end with an insert locking means and an operating end including the cleaning means wherein the protruding end is shaped and adapted to inter-fit  
10 with the insert receiving recess and being removably locked in place by the locking means of the insert also interfitting with the locking means of the holding means whereby the operating means protrudes from the insert holding assembly and is located at that opposite end to the handle portion, whereby the method includes the following steps of:

- 15 -firstly selecting an insert such as for example bristles, mop or squeegee;  
-next holding the handle portion of the holding means;  
-then slidably locating the protruding portion of the insert into the recess of the holding means;  
-next slidably locating the insert into the holding means until the locking means of both the  
20 insert and holding means snap fit into place.

Preferably to remove the insert from the holding means, each tab is pushed down or levered out to unlock the locking means.

## 25 **Brief Description**

The invention will now be described, by way of example only, by reference to the accompanying drawings:

**Figure 1** is a plan view of the assembly with **various inserts** in accordance with a first  
30 preferred embodiment of the invention.

**Figure 2** is a perspective view of one insert about to be inserted into a holding means in accordance with a first preferred embodiment of the invention.



**Figure 3** is an upper rear view of the assembly with a brush insert.

**Figure 4** is a side elevation of assembly of figure 3.

**Figure 5** is a rear end elevation view of the assembly of figure 4-facing the handle end.

**Figure 6** is a top plan view of the assembly of figure 4.

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**Figure 7** is a front upper perspective view of the **bristles insert** in accordance with a first preferred embodiment of the invention.

**Figure 8** is a side view of the bristle insert of figure 7.

**Figure 9** is a front elevation view of the bristle insert of figure 7-facing the bristles.

10 **Figure 10** is a plan elevation view of the bristle insert of figure 7.

**Figure 11** is plan view of part of one cleaning means – brush insert.

**Figure 12** is an end view of the part brush insert of figure 11.

**Figure 13** is a side view of the part brush insert.

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**Figure 14** is a front upper perspective view of the **mop insert** in accordance with a first preferred embodiment of the invention.

**Figure 15** is a side view of the mop insert of figure 11.

**Figure 16** is a front end elevation of the mop insert of figure 11- facing the mop.

20 **Figure 17** is a top plan view of the mop insert of figure 11.

**Figure 18** is plan view of part of one cleaning means – mop insert.

**Figure 19** is an end view of the part mop insert of figure 18.

**Figure 20** is a side view of the part mop insert.

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**Figure 21** is a front upper perspective view of the ‘squeegee’ or sponge insert in accordance with a first preferred embodiment of the invention.

**Figure 22** is a side view of the squeegee insert of figure 15.

**Figure 23** is a front elevation view of the ‘squeegee’ insert of figure 15-facing the squeegee.

30 **Figure 24** is a plan elevation view of the ‘squeegee’ insert of figure 15.

**Figure 25** is plan view of part of one cleaning means – squeegee insert.

**Figure 26** is an end view of the part squeegee insert of figure 25.

**Figure 27** is a side view of the part squeegee insert .

**Figure 28** is a lower perspective view of one part of the base of the other part for all cleaning means.

**Figure 29** is an end view of the base of figure 28.

5 **Figure 30** is a top plan view of the base of figure 28.

**Figure 31** is side view of the base of figure 28.

**Figure 32** is a lower perspective view of the other part of the insert base of the cleaning means.

10 **Figure 33** is an end view of the other part/halve of the insert base.

**Figure 34** is top plan view of the other part/halve of the insert base.

**Figure 35** is a side view of the other part/halve of the insert base.

15 **Figure 36** is a perspective view of both parts of the insert base fitting with one insert-squeegee type insert.

### **Description of Drawings**

The following description will describe the invention in relation to preferred embodiments of the invention, namely a holding means, an insert, an insert holding assembly and method of assembly. The invention is in no way limited to these preferred embodiments as they are purely to exemplify the invention only and that possible variations and modifications would be readily apparent without departing from the scope of the invention.

25 As shown in the figures 1-36 there is a cleaning implement assembly 1 which includes a holding means 2 for inserts 3 and to a method of installation. Holding means 2 comprises a body having ends 5 & 6 to define a length L there between, sides 7 which defines a width W, an upper face 8 and lower face 9. The holding means body is shaped in a thin planar-like shape as seen in figures 5, 9, 13 & 17 which include a handle portion 10 at one end 5 and an insert receiving means 11 at the opposite end 6 – figure 2.

30

To hold the holding means 2 to an insert 3 there are two holding mechanisms. The first holding mechanism is where the holding means body includes a first recess 15 and each insert body includes a first protruding portion 16 which are adapted and shaped to slidably

inter-fit with each other whereby protruding portions slidably clip inter fits within the first recess 15.

5 The second holding mechanism is related to a locking means which includes a holding locking means 20 located and provided in or as part of the holding means body and another locking means 21 is provided on each insert 3. The first protruding means 15 of the holding means body has a depth 22 which must be at least the same depth 23 or less of the insert 3.

10 Locking means 20 comprises a second recess 20 on the holding means 2 which is shaped to complement the shape of a second protruding means in the form of a locking tab as provided on or as part of the insert body. The second recess 20 can be located in between the ends 5 & 6 of the holding means body adjacent the first recess 15 of the holding means 2. Insert locking tabs 21 are located at one end of the insert body to be protruding there beyond as seen in figures 1a and 1c.

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In this example we have two tabs 21 each for matching second recesses 20 whereby in use as the (first holding mechanism) protruding portion 16 is slidably inserted into the first recess 15 and ahead of the recess, the second holding mechanism locking tabs 21 also slide into the second recess 20 to snap lock or click into place to removably lock the selected insert 3 into the holding portion 10. In use the tabs 21 can be operated using ones thumbs. The tabs are dimensioned to less in overall peripheral shape to allow them to slide up through recess 20 to protrude somewhat or enough to allow operating to release the insert from the holding means 2.

25 As shown handle portion 10 includes a tubular shaped grip which comprise an elongate shape or any shape that allows a users hand to hold and operate. The grip and the rest of the holding means body as seen in figures 3 & 4 can be solid or hollow and have raised ribs or grooves or pockets 25 as desired to assist in holding, cleaning or manufacturing. The handle portion 10 can also be of any length and angle with respect to the length of the holding  
30 means 2.

Located at the opposite end to the insert tabs 21 of insert 3, there is a cleaning means which can be a brush fitting (figures 1a, 2-10) or a mop fitting (which can be sponge able to soak up

moisture or fluids) as shown in figures 1b & 14-20, or the squeegee fitting which is a flat rubber blade as in figures 1c & 21-27. The cleaning means can be formed integrally or separately with the insert body 3 or be factory inserted into the insert body 3, whereby the cleaning means can include a recess 31 to slidably receive and hold the cleaning means as seen in figures 7-16. The brush fitting can include a version with just bristles 35 or a combined version using bristles and a pad 36. The brush fitting can have a width of say 191 mm and a D depth of 45mm plus the bristles as shown in figures 8-10. The mop fitting includes for example a version with rubber sponge 37 and the squeegee for example comprises a soft rubber 38.

Figures 11-13, 18-20 and 25-27, the insert 3 can have the cleaning means attached to a cleaning means base 40 which can be formed to hold the cleaning means (brush, mop or squeegee) and the base 40 is constructed and adapted slidably inter-fit with protruding means 16 of the insert 3, at the opposite end to the tabs 21. In this example base 40 comprises a I beam type cross section as shown in figure 12. Figure 13 shows the bristles in single line at the ends.

Figures 18-20 show the base 40 for the cleaning means as a mop fitting insert. As seen in figure 19 the cross section shows the base 40 being a simple T section joined or formed having a bulbous cleaning end 41 having protrusions at the distal end 43. In figures 25-27 the base 40 is for the cleaning means of the squeegee or sponge which in cross section is T shaped with a sail like cleaning end 44.

Figures 28-36 shows the insert body whereby there are two halves 45 and 46 which can be clamped together as in the example squeegee blade 38 as shown in figure 36. Halves 45 and 46 are elongate strip-like members whereby halve 45 has the tabs on one side and protrusions 47 and halve 46 also has protrusions 48 whereby both protrusions 47 & 48 interfit to hold the cleaning means (eg 38) there-between. Also fixing means 49 which can include clips or screws hold the two halves together. Other means of holding the two halves to the, or any cleaning means are also possible such as by adjustable screws.

### **Method of assembling or installation or removal**

In a method of assembling inserts in an insert holding means to form the insert holding assembly or cleaning implement assembly, includes the following steps of:

- 5 -firstly selecting an insert such as for example bristles, mop or squeegee;
- next holding the handle portion of the holding means;
- then slidably locating the protruding portion of the insert into the recess of the holding means;
- next slidably locating the insert into the holding means 2 until the locking means of both the
- 10 insert and holding means snap fit into place and
- to remove or change the insert from the holding means, each tab 21 is pushed down or levered out to unlock the locking means.

### **Advantages**

- 15 a) Versatile
- b) Easy to use
- c) Adaptable to range of inserts
- d) Interchangeable cleaning inserts
- e) Modest cost
- 20 f) Pleasing appearance
- g) Space saving
- h) Able to be washed or reused
- i) Ergonomic grip
- j) Use for any different brush, mop or squeegee inserts

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### **Variations**

The handle portion 10 can extend the whole length of the holding means body if required. The number of holding means recesses and insert tabs 21 can be varied in number and

30 location as long as they can inter-fit to snap or click together as pairs into place. The holding means 2 can be formed in one piece or in parts. This also applies to the inserts themselves as well.

The recess 15 need not be just a recess but can extend right into the holding means body to form an aperture. The recess 15 and the protruding means 16 can extend in what ever ratio of the length (between ends) of their respective bodies as required. The protruding means 16 though shown as extending right across the width of the insert may only extend part of the way across which also applies to the recess which also may or may not extend right across. Other examples for the shape of the cleaning means are equally possible such as combinations or scoop shaped.

Throughout the description of this specification, the word “comprise” and variations of that word such as “comprising” and “comprises”, are not intended to exclude other additives, components, integers or steps. It will of course be realised that while the foregoing has been given by way of illustrative example of this invention, all such and other modifications and variations thereto as would be apparent to persons skilled in the art are deemed to fall within the broad scope and ambit of this invention as is hereinbefore described.

It will also be understood that where a product, method or process as herein described or claimed and that is sold incomplete, as individual components, or as a “kit of Parts”, that such exploitation will fall within the ambit of the invention. This invention may also broadly be said to consist in the parts, elements and features referred to or indicated in the specification of the application, individually or collectively, and any or all combinations of any two or more of the parts, elements or features, and where specific integers are mentioned herein which have known equivalents such equivalents are deemed to be incorporated herein as if individually set forth.

To those skilled in the art to which the invention relates, many changes in construction and widely differing embodiments and application of the invention will suggest themselves without departing from the scope of the invention as defined in the appended claims. The disclosures and the descriptions herein are purely illustrative and are not intended to be limiting.

For purposes of the description hereinafter, the terms “upper”, “lower”, “right”, “left”, “vertical”, “horizontal”, “top”, “bottom”, “lateral”, “longitudinal” and derivatives thereof shall relate to the invention as it is oriented in the drawing figures. However it is to be understood that the invention may assume various alternative variations, except where

expressly specified to the contrary. It is also to be understood that the specific devices illustrated in the attached drawings, and described in the following specification are simply exemplary embodiments of the invention. Hence specific dimensions and other physical characteristics related to the embodiments disclosed herein are not to be considered as  
5 limiting.

It will also be understood that where a product, method or process as herein described or claimed and that is sold incomplete, as individual components, or as a "kit of Parts", that such exploitation will fall within the ambit of the invention.

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**What I Claim is:**

Claim 1: A cleaning implement assembly, includes a holding means and insert having cleaning means, the holding means includes a body with sides and ends, having a handle  
5 portion and insert receiving means, the insert receiving means comprises an insert receiving recess adapted to slidably receive at least one insert and locking means adapted to enable the said insert to be removably held therein the insert receiving recess,

each insert includes a body having a protruding end with an insert locking means and an  
10 operating end including the cleaning means wherein the protruding end is shaped and adapted to inter-fit with the insert receiving recess and be removably locked in place by the locking means of the insert also interfitting with the locking means of the holding means whereby the operating means protrudes from the insert holding assembly and is located at that opposite end to the handle portion.

15 Claim 2: The cleaning implement assembly as claimed in claim 1 wherein, the holding means has ends and sides, the handle portion is located at an opposite end to the insert receiving recess.

20 Claim 3: The cleaning implement assembly as claimed in claim 2 wherein, the insert locking means is located between the handle portion and insert recess.

Claim 4: The cleaning implement assembly as claimed in claim 3 wherein, the locking  
25 means includes a locking recess adapted to in use receive a complementary locking means attached to or formed as part of the insert.

Claim 5: The cleaning implement assembly as claimed in claim 4 wherein, the locking  
means functions in a snap fitting type arrangement.

30 Claim 6: The cleaning implement assembly as claimed in claim 5 wherein, there are two locking recesses for two tab members.



Claim 7: The cleaning implement assembly as claimed in claim 6 wherein, the holding means body is shaped having the handle portion being elongate handle portion and the body then fans outwardly in a curved manner to form the insert receiving recess.

5 Claim 8: The cleaning implement assembly as claimed in claim 7 wherein, the cleaning means can be selected from a brush fitting, a mop fitting, and squeegee fitting.

Claim 9: The cleaning implement assembly as claimed in claim 8 wherein, each locking means of holding means includes a specially shaped recess adapted to snap fittedly  
10 receive a complementary shaped tab as provided on/with the insert.

Claim 10: The cleaning implement assembly as claimed in claim 9 wherein, the insert can be fabricated as a one piece body or as two halves that clamp the cleaning means there  
15 between.

Claim 11: A method of assembling inserts in an insert holding means to form the  
cleaning implement assembly, the assembly includes a holding means and insert having  
cleaning means, the holding means includes a body with sides and ends, having a handle  
portion and insert receiving means, the insert receiving means comprises an insert receiving  
20 recess adapted to slidably receive at least one insert and locking means adapted to enable the  
said insert to be removably held therein the insert receiving recess, each insert includes a  
body having a protruding end with an insert locking means and an operating end including  
the cleaning means wherein the protruding end is shaped and adapted to inter-fit with the  
insert receiving recess and being removably locked in place by the locking means of the  
25 insert also interfitting with the locking means of the holding means whereby the operating  
means protrudes from the insert holding assembly and is located at that opposite end to the  
handle portion, whereby the method includes the following steps of:

-firstly selecting an insert such as for example bristles, mop or squeegee;  
30 -next holding the handle portion of the holding means;  
-then slidably locating the protruding portion of the insert into the recess of the holding  
means;

-next slidably locating the insert into the holding means until the locking means of both the insert and holding means snap fit into place.

5 Claim 12: A method as claimed in claim 11 wherein, to remove the insert from the holding means, each tab is pushed down or levered out to unlock the locking means.

Claim 13: A cleaning implement assembly substantially as described with reference to the figures of the accompanying drawings.

10 Claim 14: A method of assembling inserts in an insert holding means to form the cleaning implement assembly substantially as described with reference to the figures of the accompanying drawings.

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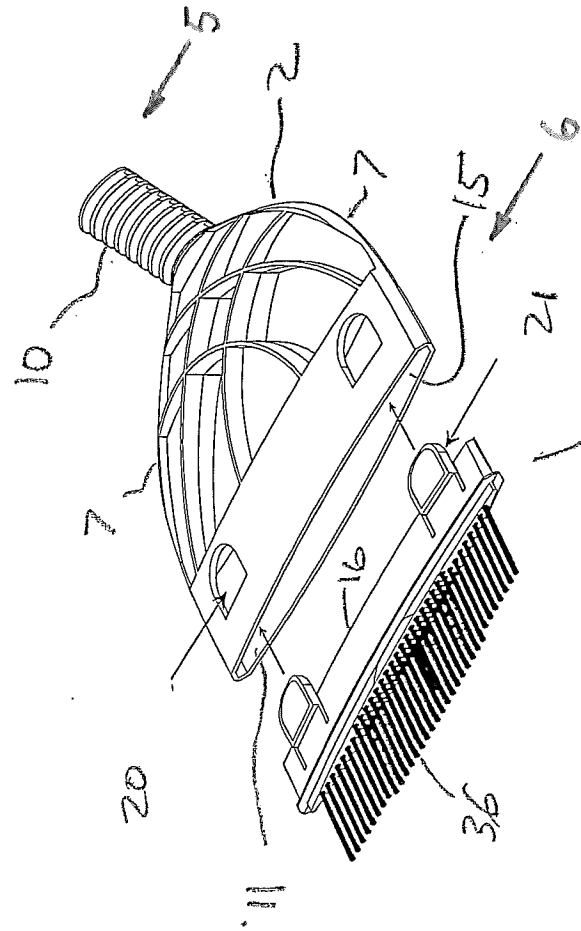
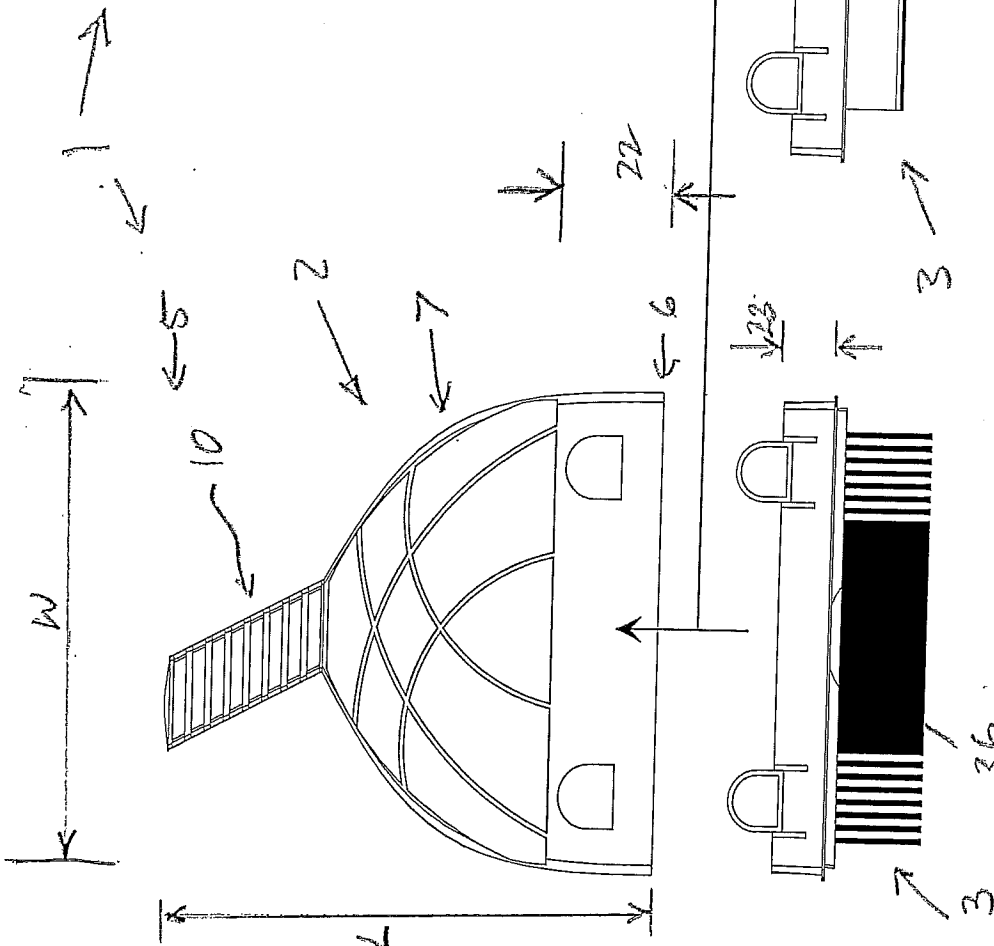
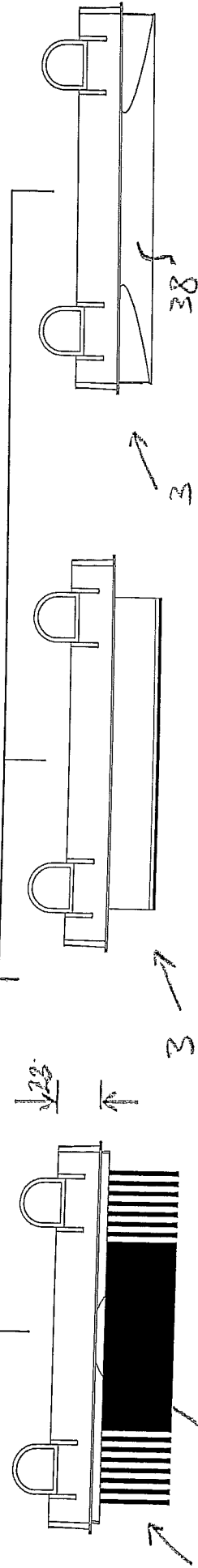


FIGURE 2



(a)



(c)

FIGURE 1

(b)

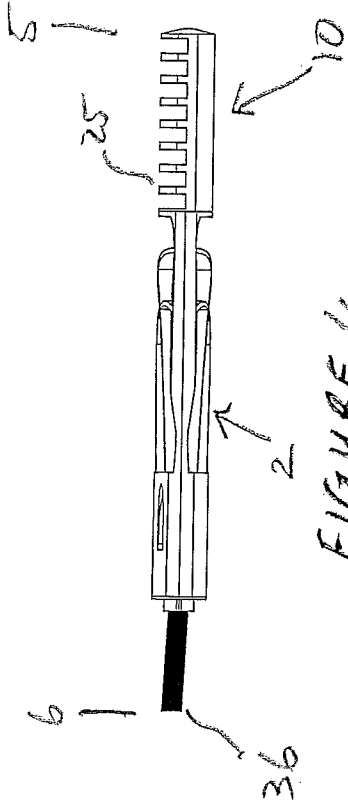


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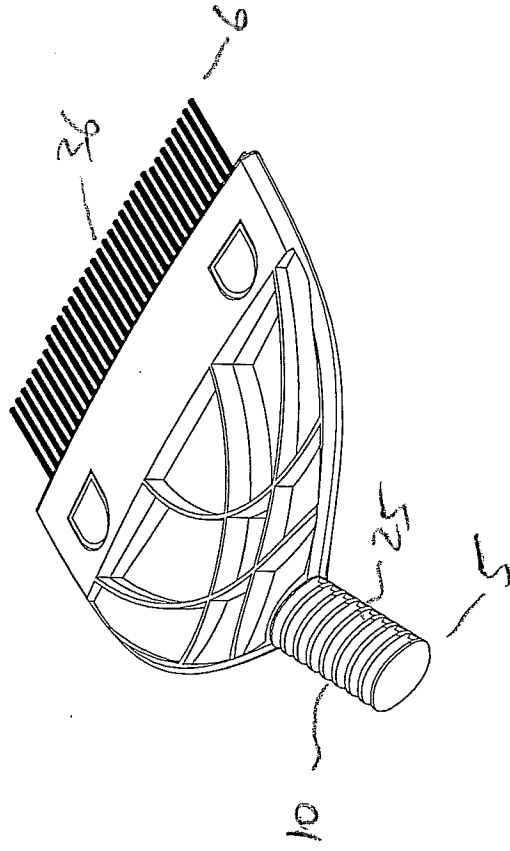


FIGURE 3

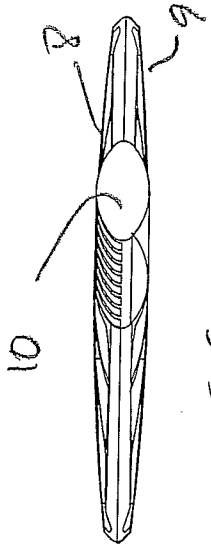


FIGURE 5

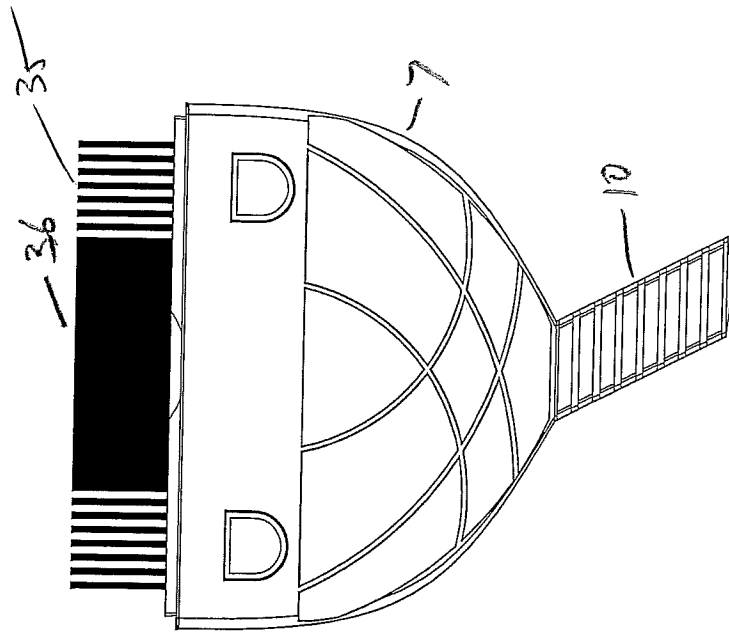


FIGURE 6

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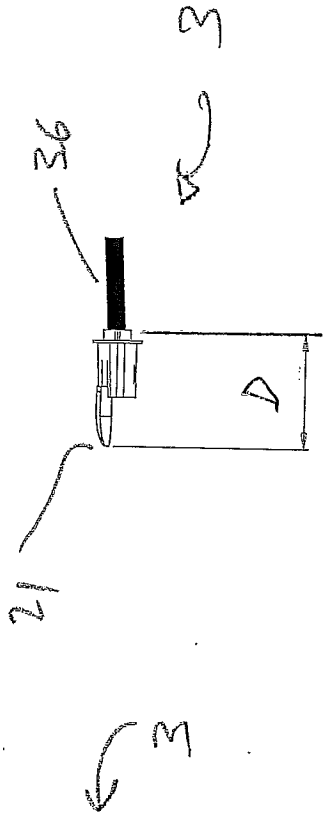


FIGURE 8

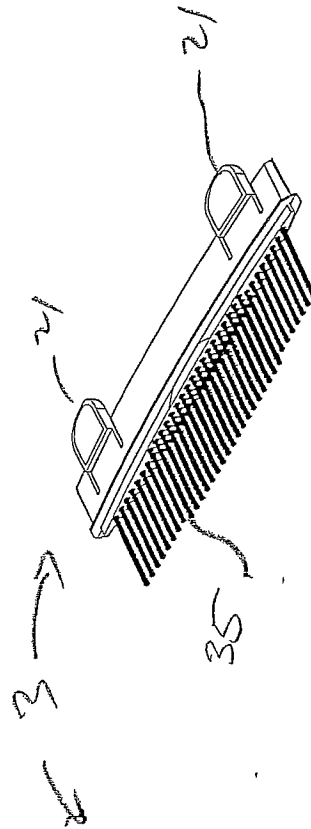


FIGURE 7

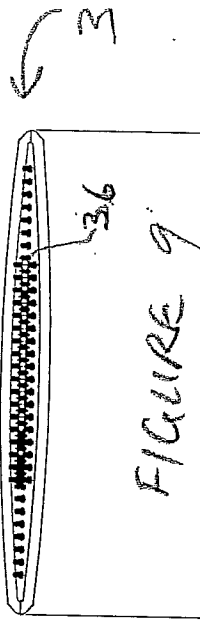


FIGURE 9

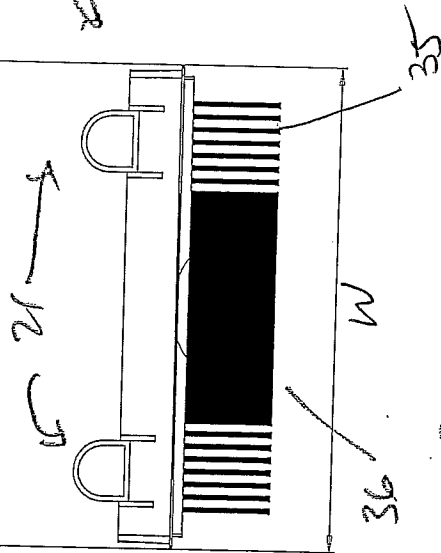


FIGURE 10

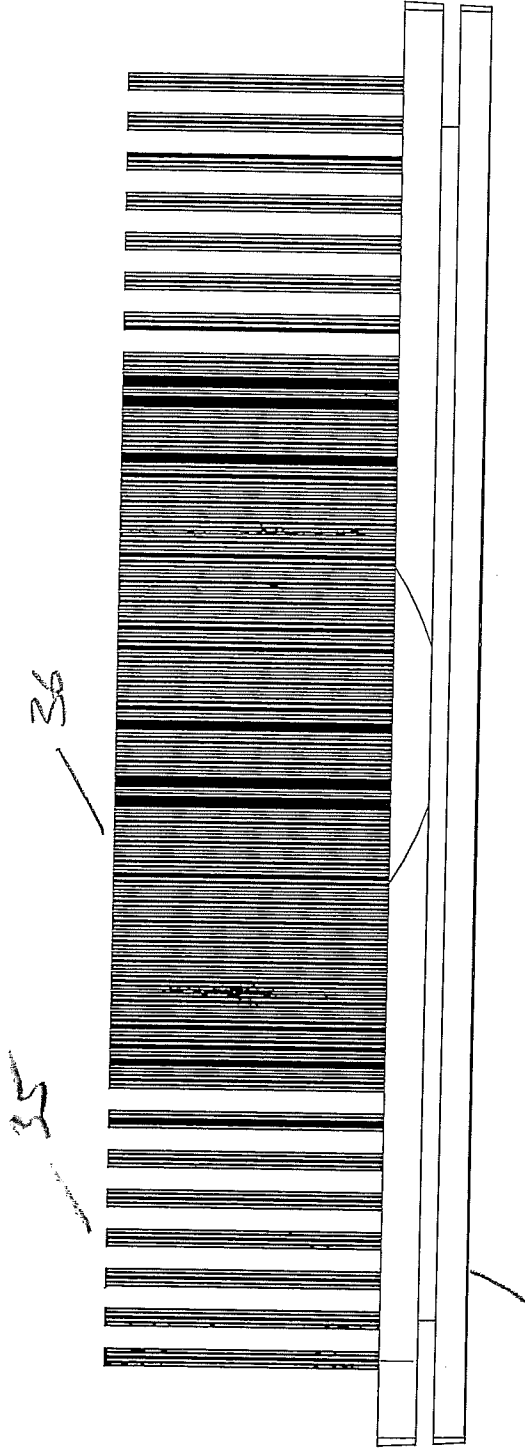


FIGURE 11

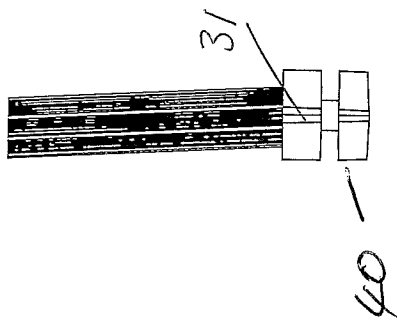


FIGURE 12

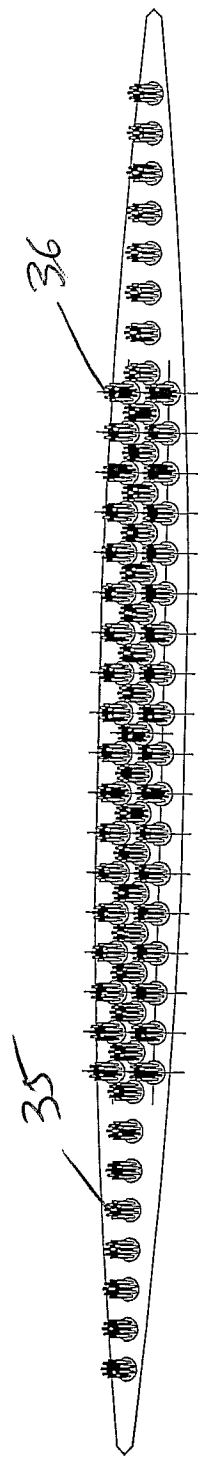


FIGURE 13



FIGURE 15

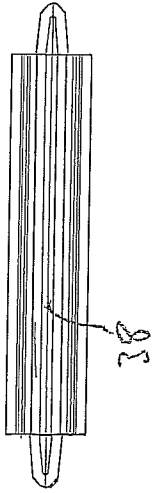


FIGURE 16

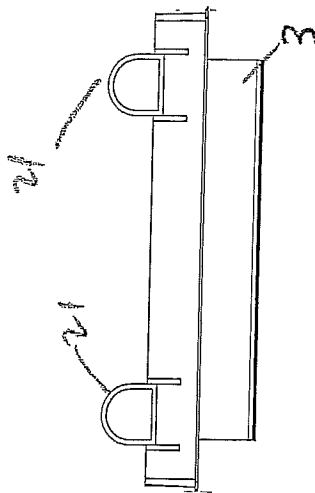


FIGURE 17

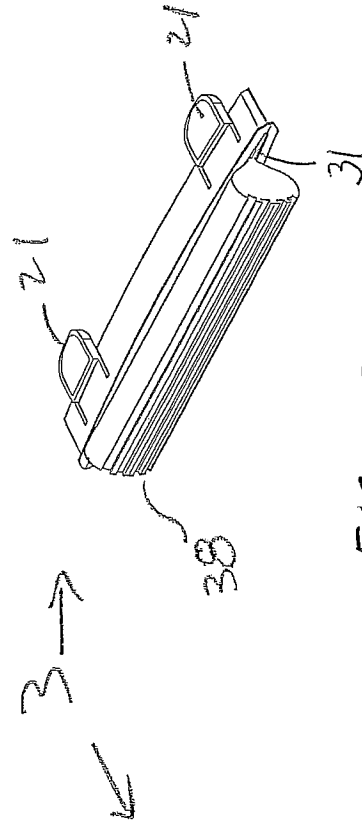


FIGURE 14

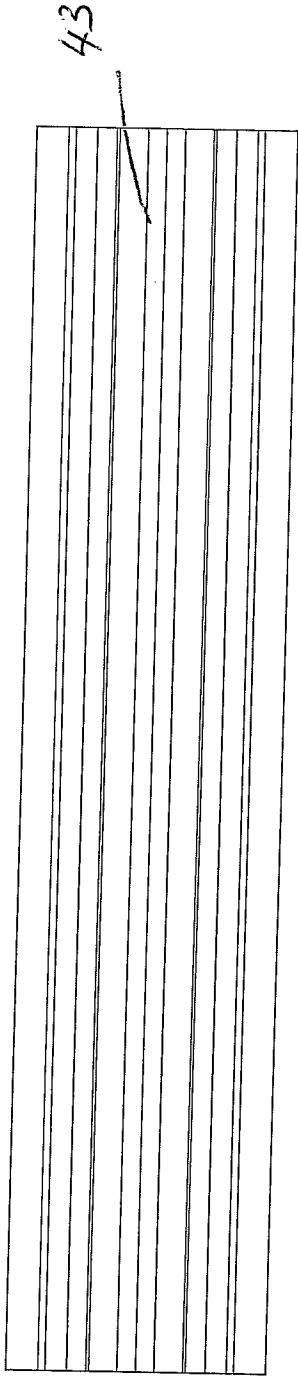


FIGURE 18

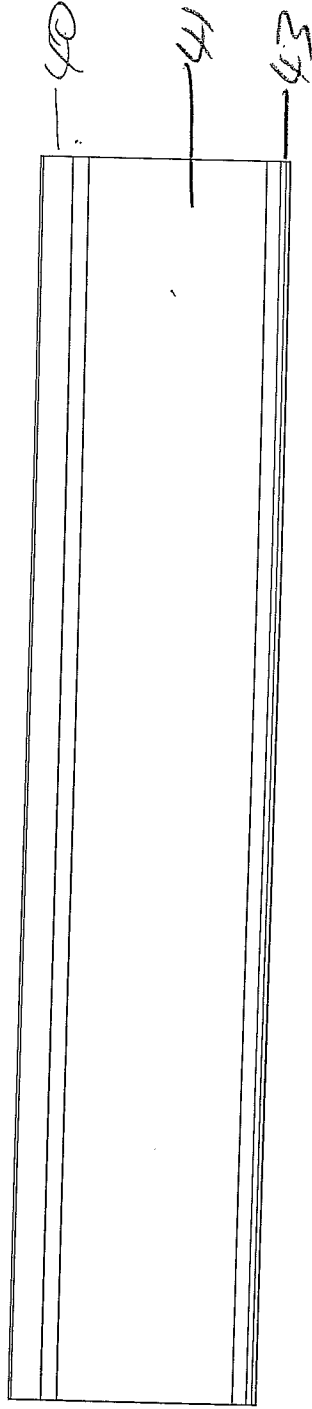


FIGURE 20

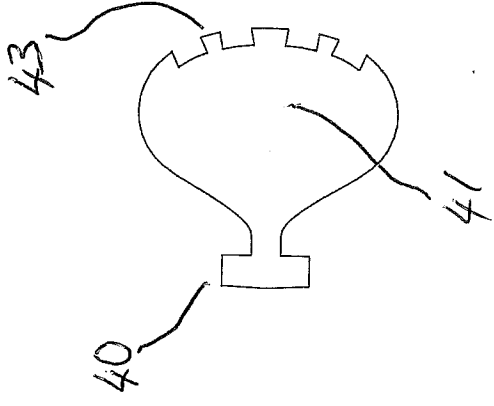


FIGURE 19



FIGURE 23

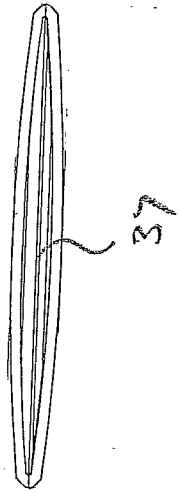


FIGURE 22

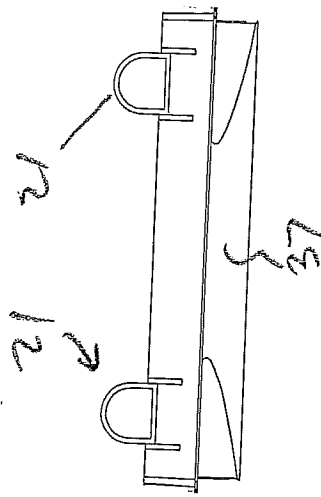
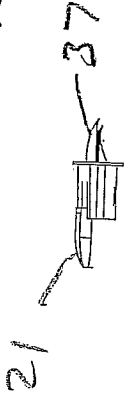


FIGURE 24

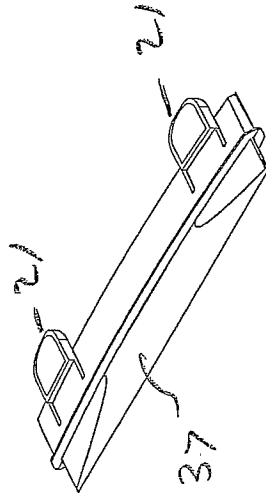


FIGURE 21

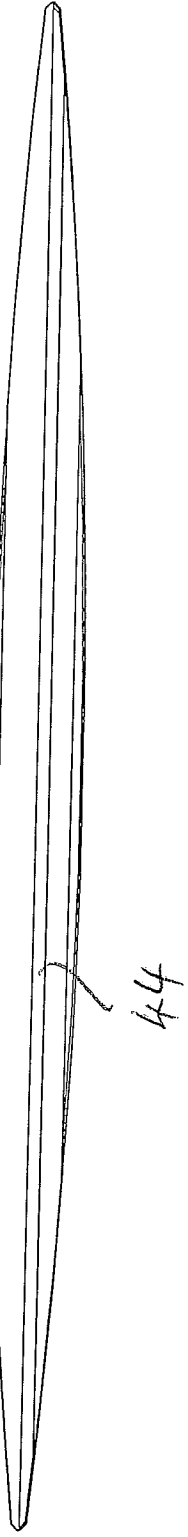


FIGURE 25

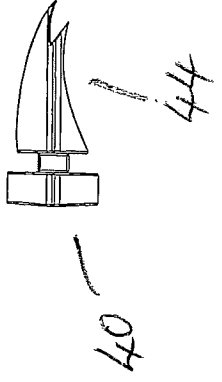


FIGURE 26

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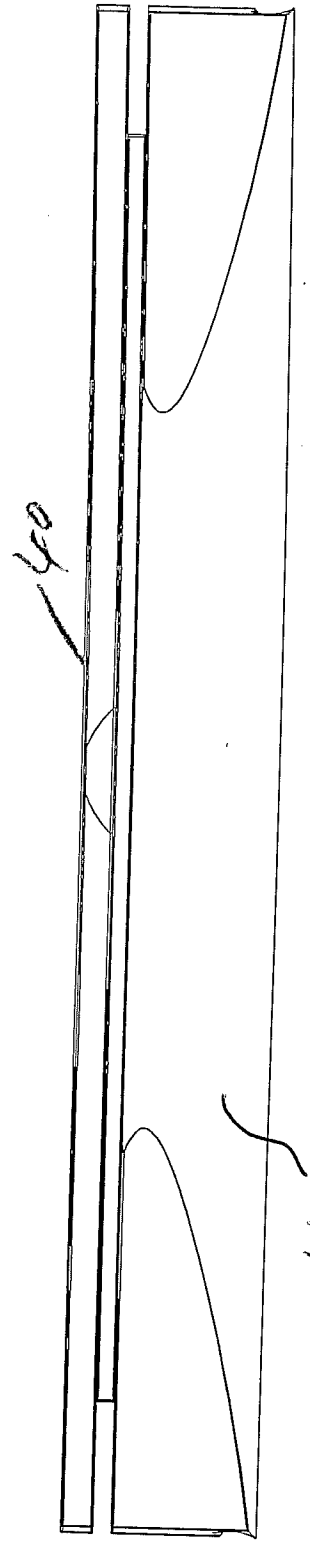


FIGURE 27

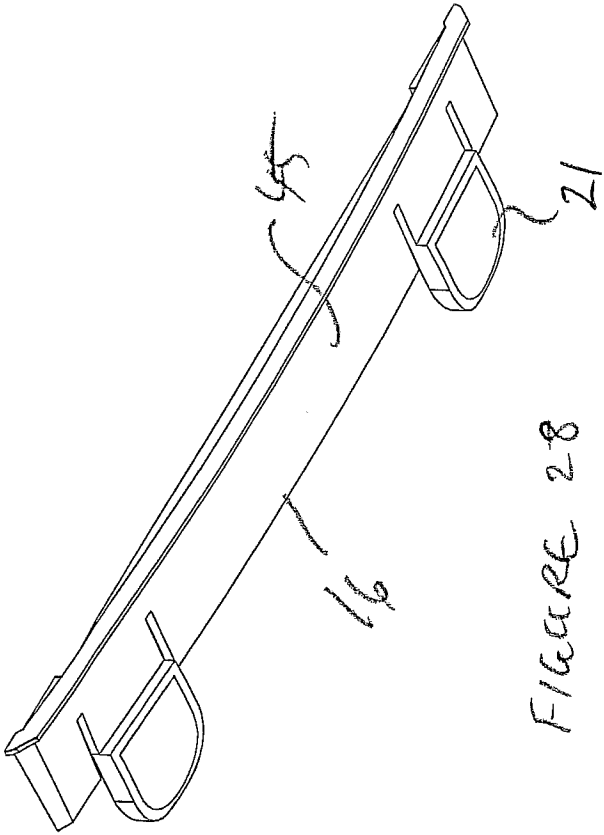


FIGURE 28

FIGURE 29

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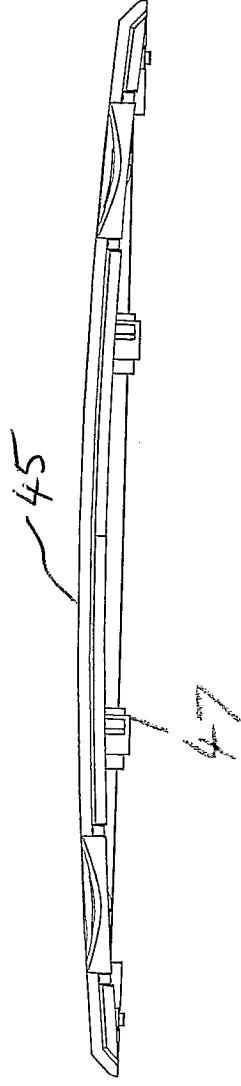


FIGURE 31

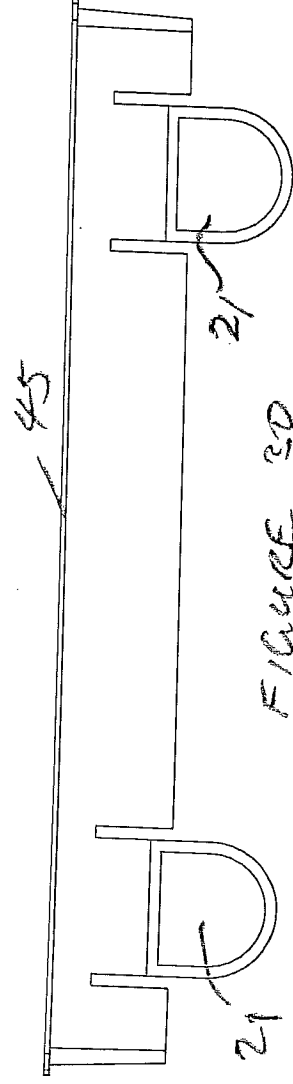


FIGURE 30

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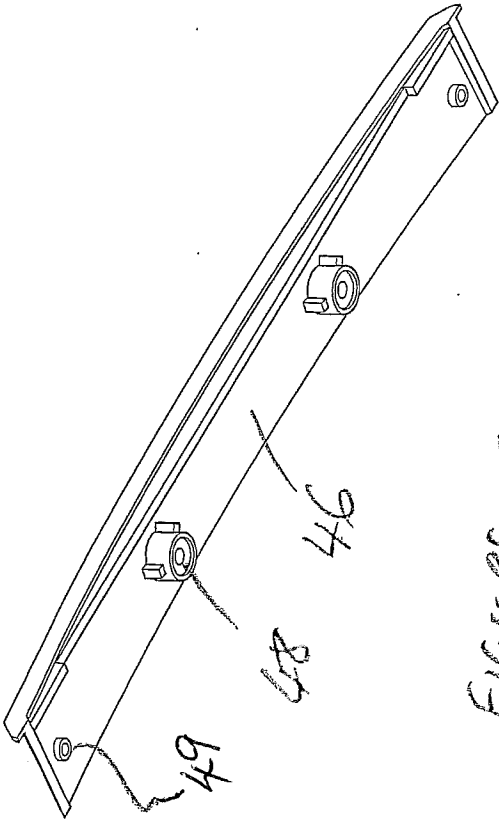


FIGURE 32

FIGURE 33

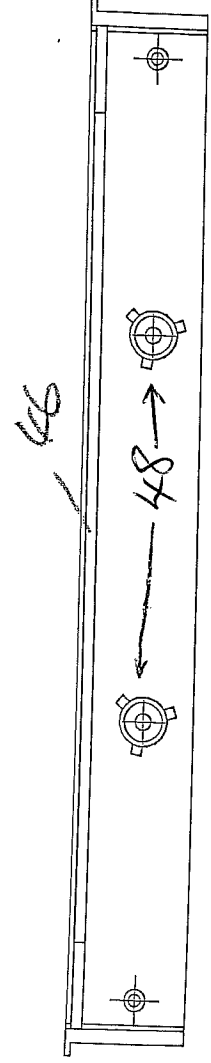
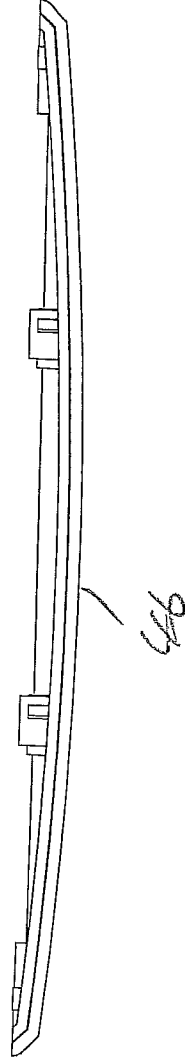


FIGURE 34

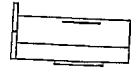


FIGURE 35

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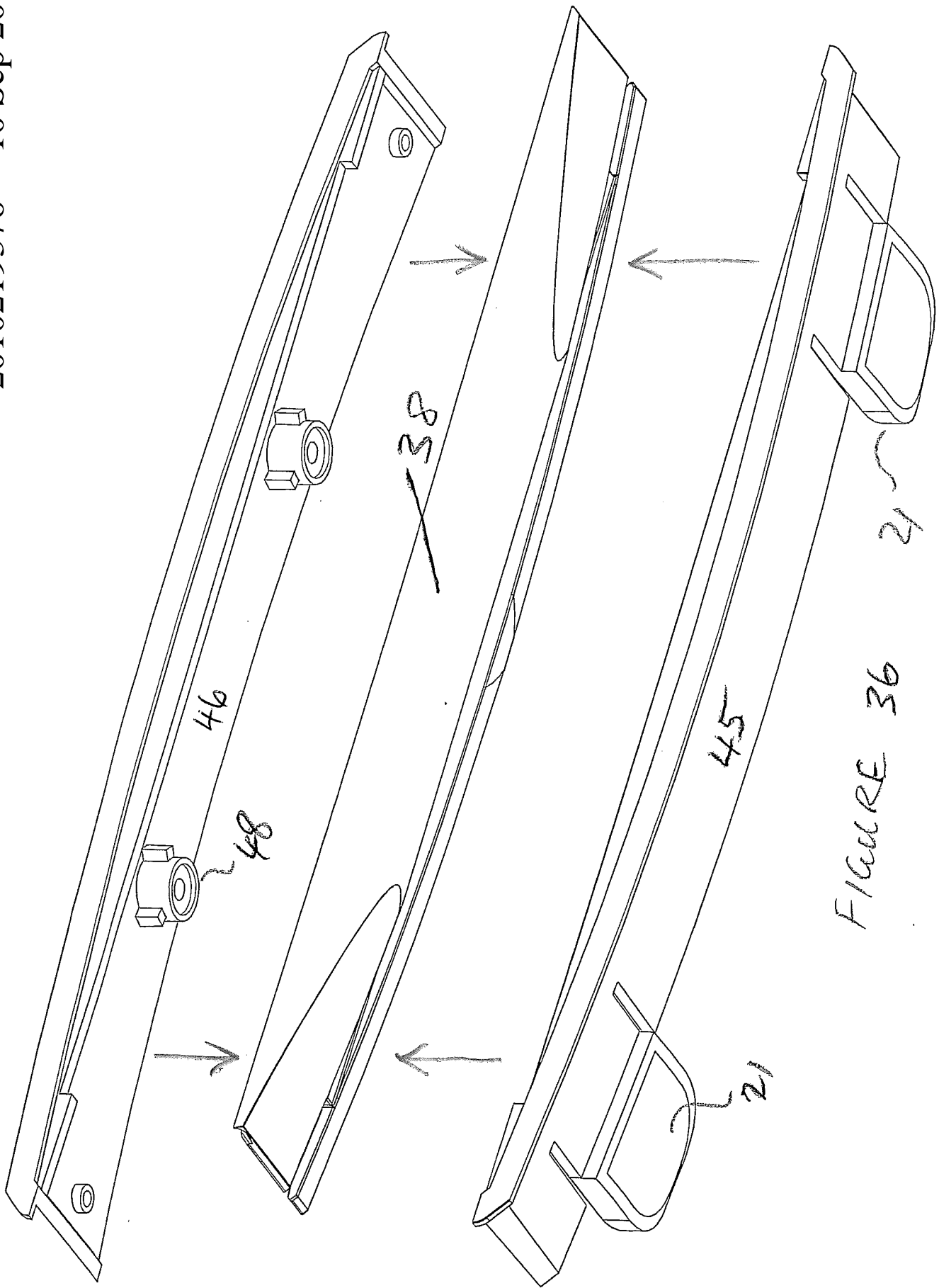


FIGURE 36