

19



Europäisches Patentamt
European Patent Office
Office européen des brevets

11

Publication number:

**0 077 572
A2**

12

EUROPEAN PATENT APPLICATION

21

Application number: 82109680.7

51

Int. Cl.³: **B 05 B 1/14**

22

Date of filing: 20.10.82

30

Priority: 21.10.81 IT 1265681

43

Date of publication of application:
27.04.83 Bulletin 83/17

84

Designated Contracting States:
AT CH DE FR GB IT LI

71

Applicant: **Morchio, Orlando**
Via Piani di Praglia, 29
Ceranesi Genova(IT)

72

Inventor: **Morchio, Orlando**
Via Piani di Praglia, 29
Ceranesi Genova(IT)

74

Representative: **Dr. Ing. A. Racheli & C.**
Viale San Michele del Corso, 4
I-20144 Milano(IT)

54

Multijet spraying device for applying fluid substances uniformly and efficiently.

57

A jet comb device is described, consisting of an internally hollow body (11) wherefrom tooth elements (12) are diverging, these latter being arranged more or less thickly. An end of said body (11) is provided with a coupling element (9) joined, for example, to a feeding device (7) of the substance to be ejected. Said substance is ejected or sprinkled through the cavities provided inside the body and it flows out of the orifices foreseen in the tooth elements.

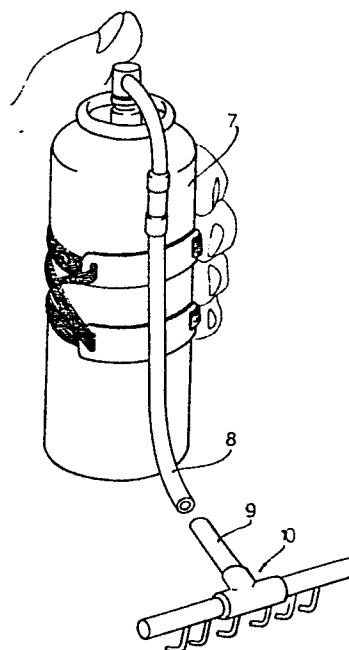


FIG.1

Applicant:

ORLANDO MORCHIO

Via Piani di Praglia, 29

CERANESI (Genova) Italy

TITLE MODIFIED
see front page

"A JET COMB DEVICE TO SPREAD ANY KIND OF SUBSTANCES IN
A UNIFORM AND WITHOUT WASTE WAY".

This invention relates to a jet comb device apt to eject,
uniformly and without waste, any substance, be it a liquid
(for example, an insecticide, or watery solutions, etc.),
a foam (for example, a shampoo or detergents, etc.), a
5. powder (a talcum powder, etc.) or a gaseous substance,
and so on.

Presently different types of spray bottles and aerosol
bombs are found on the market which allow the spray of

liquids, foams and powders, however with a great waste of the substance and the consequent poor efficiency of the substance action on the surface to be treated.

- Moreover the comb or the device apt to spray the substance,
5. must be seized by the user separately, and this results rather uncomfortable.

- Therefore the object of the present invention is to provide a jet comb device avoiding useless wastes of the product along with the possible dangerous substance inhalations from
10. the man or from the animal to be treated with said substance.

An auxiliary object is to provide a jet comb device allowing the substance distribution with a sufficient precision also on limited surfaces.

- The object is attained by said jet device by foreseeing that
15. the body itself, the coupling element and at least some tooth elements must be internally hollow, so as to form a passage for any substance to be uniformly distributed on the surfaces to be treated, just when the comb device is used.

20. A particular solution foresees that said internally hollow tooth ends are ending with an open section having a smaller area such as to form an orifice of efficient jet.

A preferred solution foresees that at least some of said tooth elements are bent.

Moreover it can be foreseen that some ends of the tooth elements are provided with a surface to convey the substance to be ejected.

5.

A preferred solution of the invention will now be described with reference to the annexed drawings wherein:

Fig. 1 is a general view of the device forming the object of the invention;

10. Fig. 2 is a particular view of the comb device;
Fig. 3 is a section view taken along line 3-3 of figure 2.

The jet comb device 10 comprises an internally hollow body 11 having, for instance, a circular section. Anyhow a section whatever can be foreseen. Said body 11 ends with a coupling element 9, which, for instance, is engageable with a small tube 8, this latter is linked with a container 7 of the substance to be ejected, be it liquid, gaseous or in powder.

15.

From said body 11, internally hollow tooth elements 12 are diverging, which end with an aperture 13. They may be of any length and be arranged more or less thickly. The cavity section of said tooth elements may have a shape whatever.

20.

Some of said elements may also result without an internal cavity but this solution is not shown in the figures.

The ends 12a of each tooth element 12 may be slightly tapered, namely, they may have an orifice with a smaller section area (see figure 3).

- In this way the jet orifice results very efficient. Likewise,
5. surfaces can be foreseen to convey the substance to be ejected through the ends 12a. Said surfaces are not represented in the figures.

- The practical device can be made of any material. Also the tooth elements and the body itself may be of any kind of
10. material.

- Said comb device applied to the container 7 of the substance to be ejected is laid and moved in different directions on the surface to be treated, while, at the same time, the substance to be ejected is conveyed towards the coupling
15. element 9, then it is spread inside the body 11 and is ejected from the orifices of the ends 12a of tooth elements 12.

Therefore it is uniformly spread and it results especially well distributed if the surface to be treated is a hairy or shaggy surface.

20. For instance, said device can be used advantageously for a hygienical treatment of animals (like dogs, cats, etc.) and of people as well as for cleaning carpets, moquettes, etc. Said practical jet device can be also easily applied to any kind of spray bottles and ejectors.

ORLANDO MORCHIO
CERANESI (Genova) Italy

C L A I M S

1. A jet comb device to spread any kind of substances in a uniform and without waste way, said device consisting of: a body (11), a coupling element (9) with a container (7), and tooth elements (12) these latter being arranged more
5. or less thickly and being of a desired length, characterized by that said body (11), the coupling element (9) and at least one of the tooth elements (12) are internally hollow, said tooth elements being moreover provided with at least an orifice (13) such as form a passage for any kind of
10. substance uniformly distributed or spread through the orifice of the tooth element (12) during the use of said jet comb device.
2. A jet comb device according to claim 1, characterized by that the internally hollow tooth elements (12) are provided
15. with at least an orifice (13) ending with a smaller section area such as to form an ejecting orifice.
3. A jet comb device according to claim 1, characterized by that at least one of said tooth elements (12) ends with

a hook bent end.

4. A jet comb device according to claim 1, characterized by that each of the ends of the tooth element (12) has a conveying surface of the liquid to be spread.

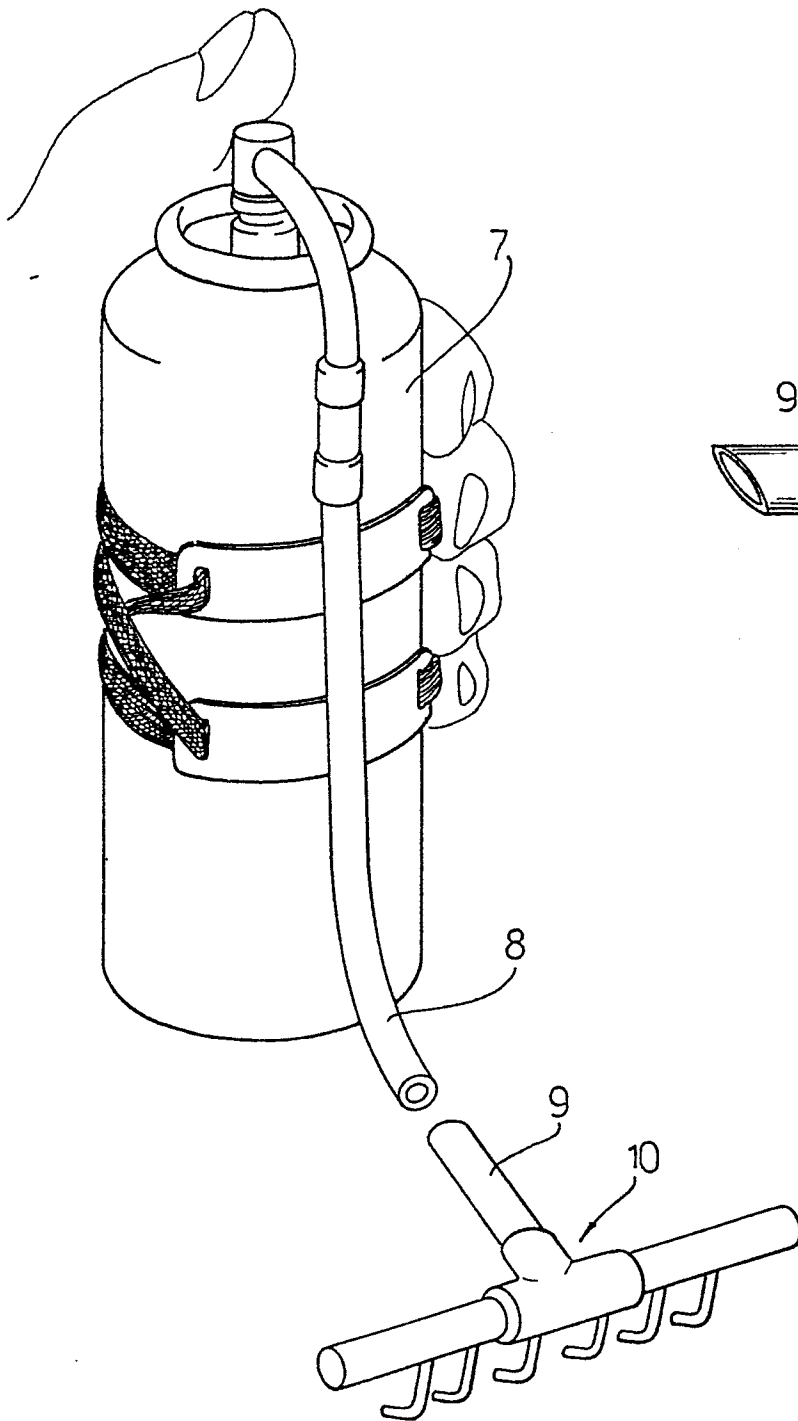


FIG. 1

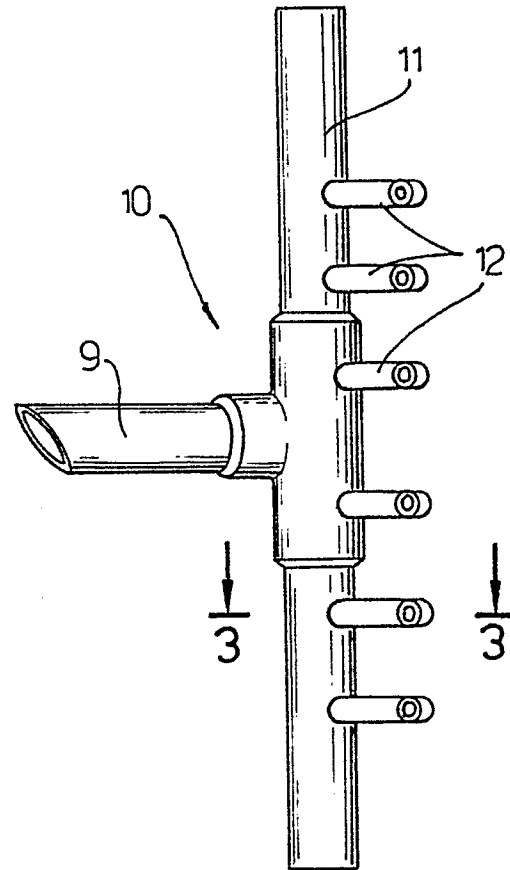


FIG. 2

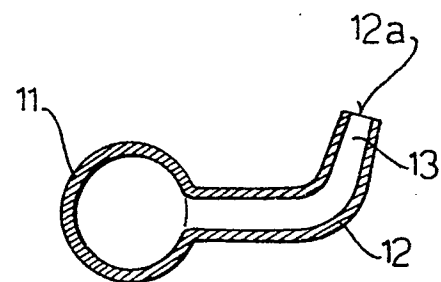


FIG. 3