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(54) **Device for introducing dehydrating salts into tubolar metal profile bars for double glazing**

(57) A device for introducing dehydrating salts into tubular metal profile bars for double glazing, characterised by comprising:
- guide means for the profile bar,
- at least one element (2') to be slid along at least one of the minor surfaces of the profile bar,
- a syringe (8) movable from and towards one (24) of the minor surfaces,
- drive means (14) for said syringe,
- a conduit (18) for connecting the syringe (8) to a vessel (20) for containing the dehydrating salts.

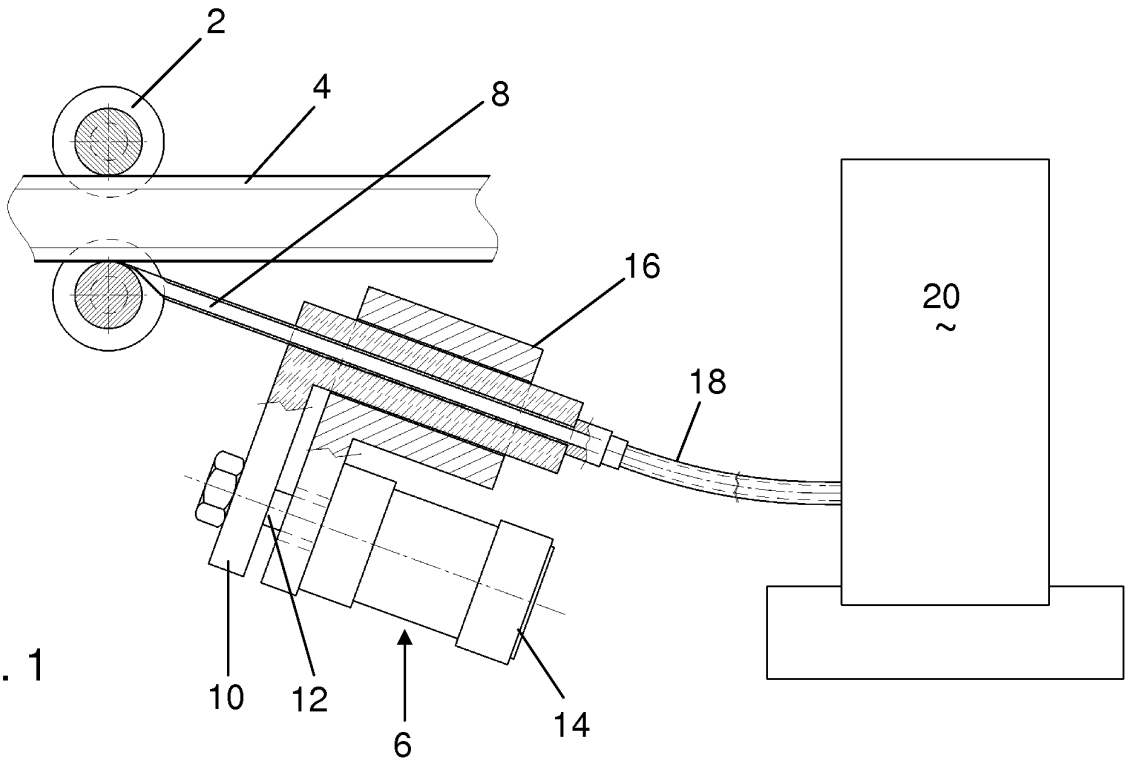

FIG. 1

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Description

[0001] The present invention relates to a device for introducing dehydrating salts into tubular metal profile bars for double glazing.

[0002] Those tubular metal profile bars forming the double glazing frame are known to be provided, in that surface facing the chamber formed by the two glass sheets, with a plurality of microperforations for the passage of moisture, which is absorbed by the salts inserted into the profile bar.

[0003] The salts are generally introduced by a procedure comprising an initial step of boring the inner surface, a salt introduction step and a step of closing the formed hole by a plastic or other plug.

[0004] However these profile bars present certain drawbacks, and in particular:

- they require the presence of an additional plug,
- they present an unattractive outer appearance due to the presence of the plug.

[0005] The object of the invention is to eliminate these drawbacks by providing a device which enables the salts to be easily and comfortably introduced into the profile bar while at the same time maintaining an attractive outer appearance.

[0006] This object is attained according to the invention by a device for introducing dehydrating salts into tubular metal profile bars for double glazing as described in claim 1.

[0007] The present invention is further clarified hereinafter with reference to the accompanying drawings, in which:

Figure 1 is a schematic view of the device of the invention,
Figure 2 is an enlarged side view thereof,
Figure 3 is a front view thereof,
Figures 4 and 5 show two steps in the insertion of the syringe head into the profile bar,
Figure 6 shows the device during the step of filling the profile bar with salts,
Figures 7 and 8 shows the steps of withdrawing the syringe.

[0008] As can be seen from the figures, the dehydrating salt introduction device according to the invention comprises substantially two rollers 2, 2' (driven by an electric motor, not shown in the drawings) for retaining and guiding the minor surfaces of a profile bar 4 for double glazing, and a salt introduction device indicted overall by 6.

[0009] In particular, this device comprises a metal syringe 8 retained by a slide 10 rigid with the piston rod 12 of a hydraulic or pneumatic cylinder-piston unit 14 and slidable within a guide 16.

[0010] A flexible conduit 18 for feeding dehydrating salts contained in a vessel 20 is connected to the syringe 8.

[0011] The device of the invention is used in the following manner:

the cylinder-piston unit 14 is fed such that, following the emergence of the piston rod 12, the syringe tip 22 incises one 24 of the minor surfaces of the profile bar to obtain a small aperture 26 by opening out a lip 28 (see Figures 4 and 5).

[0012] When the syringe tip has totally entered the interior of the profile bar, the salts are introduced from the vessel 20 through the conduit 18 (see Figure 6). Once filling has terminated, the piston rod is made to withdraw into the cylinder with consequent withdrawal of the syringe from the surface of the profile bar (Figure 7).

[0013] The electric drive motor for the rollers is then operated so that these are moved in the direction of the syringe (towards the right observing Figure 8), with the lower roller 2' returning the lip 28 into the configuration coplanar with the edge, to close the aperture previously made by the syringe.

[0014] The profile bar can then be treated with butyl sealant and applied to the double glazing.

[0015] From the aforegoing it is apparent that device of the invention enables salts to be introduced into the profile bar in an easy and comfortable manner while at the same time maintaining an attractive outer appearance.

Claims

1. A device for introducing dehydrating salts into tubular metal profile bars for double glazing, **characterised by** comprising:

   - guide means for the profile bar,
   - at least one element (2') to be slid along at least one of the minor surfaces of the profile bar,
   - a syringe (8) movable from and towards one (24) of the minor surfaces,
   - drive means (14) for said syringe,
   - a conduit (18) for connecting the syringe (8) to a vessel (20) for containing the dehydrating salts.

2. A device as claimed in claim 1, **characterised in that** the guide means and the sliding element consist of pairs of vertically superposed rollers of vertical axis.

3. A device as claimed in claim 2, **characterised in that** the drive means consist of a slide (10) rigid with the piston rod (12) of a cylinder-piston unit (14).

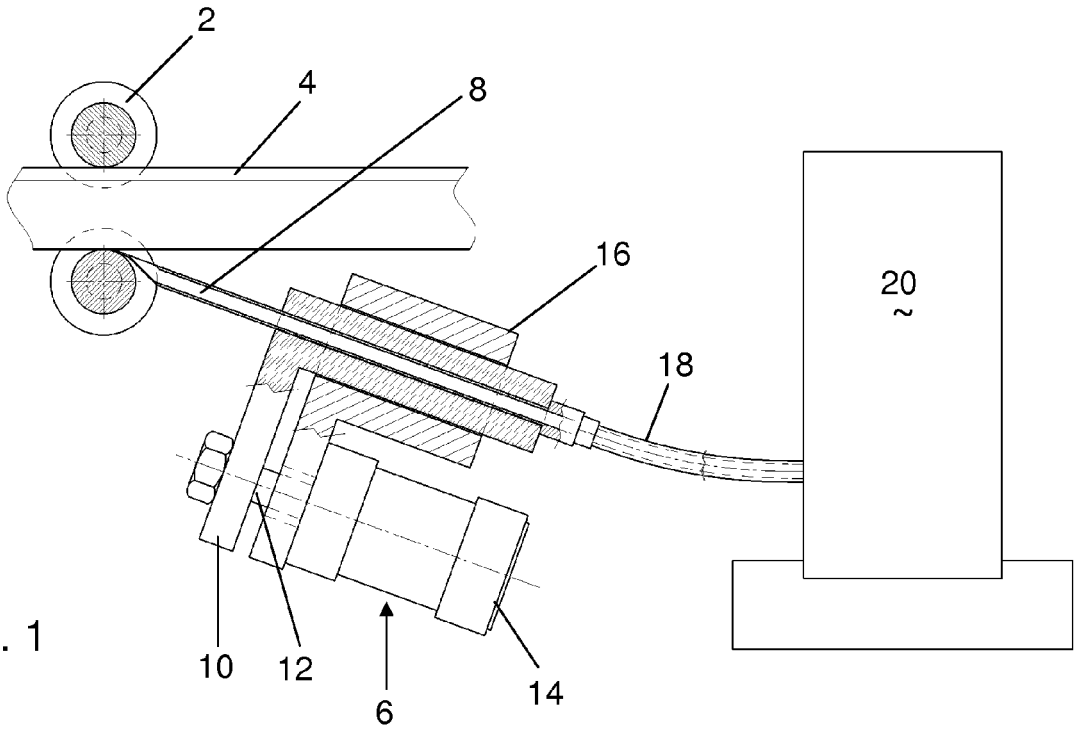

FIG. 1

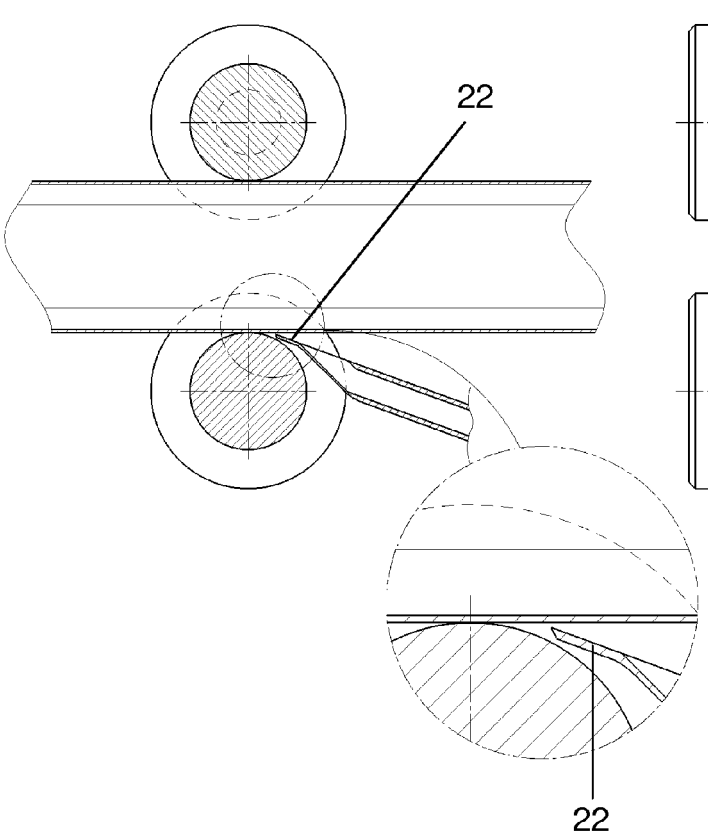

FIG. 2

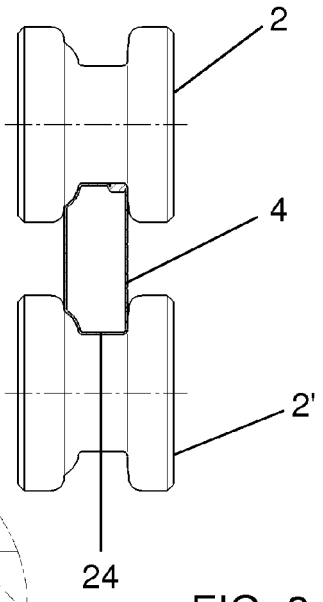

FIG. 3

FIG. 4

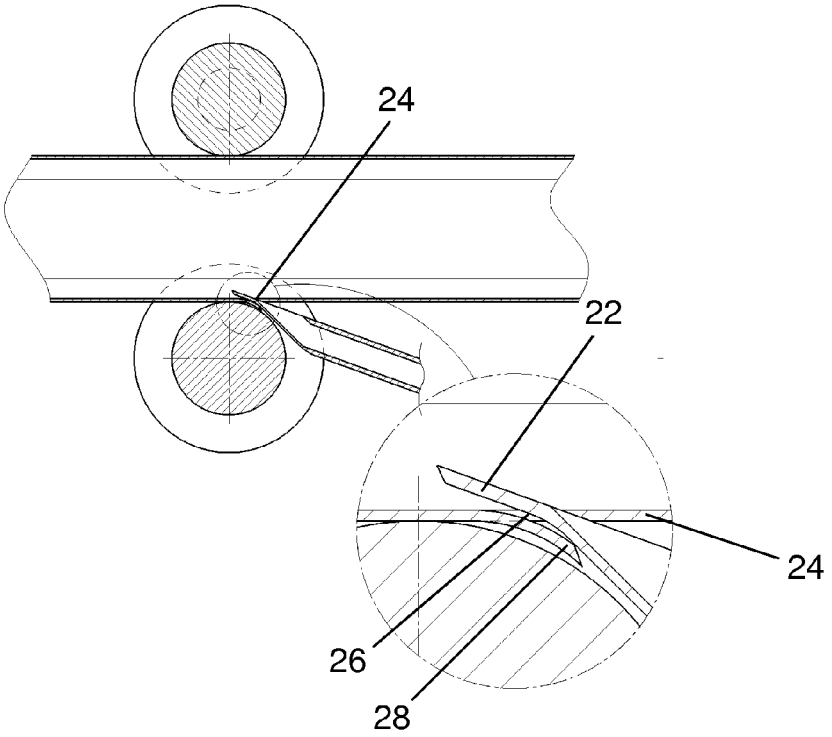

FIG. 5

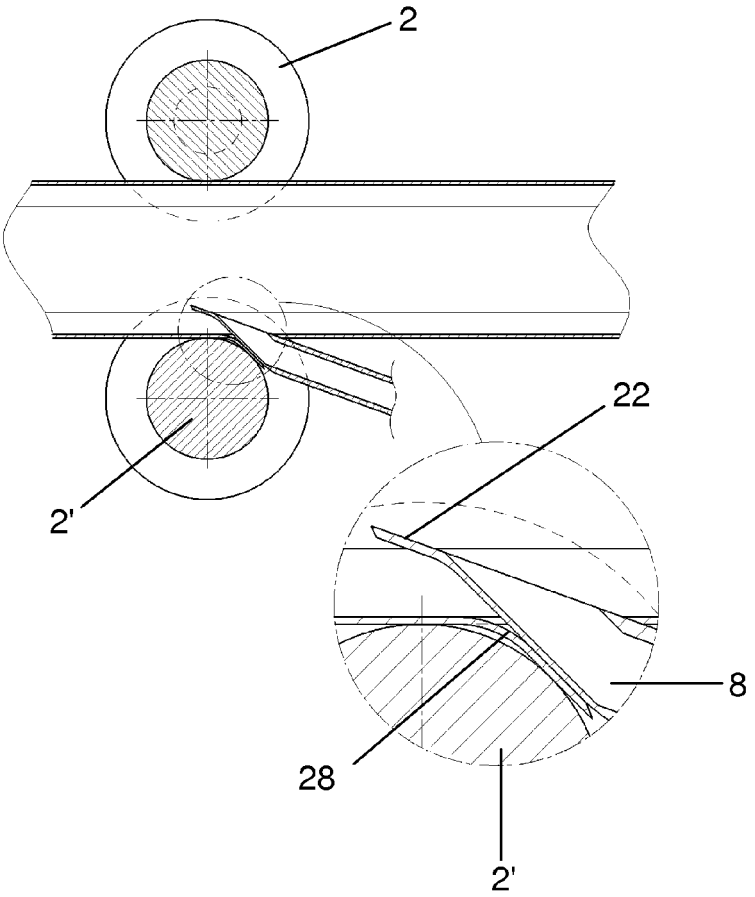

FIG. 6

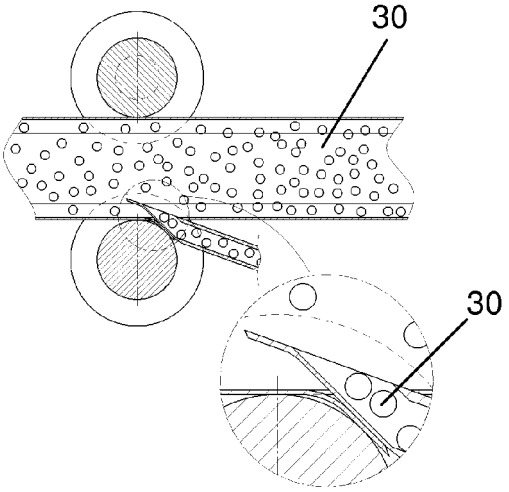

FIG. 7

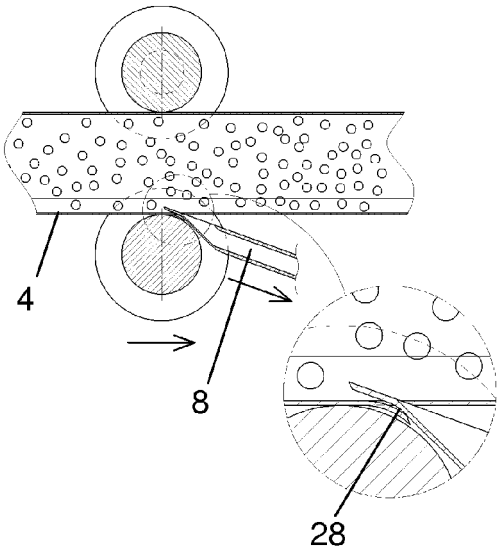

FIG. 8