

- (21) Application No 8000789
- (22) Date of filing 10 Jan 1980
- (30) Priority data
- (31) 240751U
- (32) 15 Jan 1979
- (33) Spain (ES)
- (43) Application published 28 Aug 1980
- (51) INT CL³
E05C 3/12
- (52) Domestic classification
E2A 106 414 CAM
- (56) Documents cited
None
- (58) Field of search
E2A
- (71) Applicants
ITW España, S.A.,
Carretera de Ribas,
Km. 31,7,
Las Franquesas Del
Valles,
(Barcelona),
Spain.
- (72) Inventors
Claudio Sorin
- (74) Agents
Gill, Jennings & Every

(54) Holder devices

(57) A holder device to fasten cylindrical tubes and bars 4 is constituted from an integral body obtained by the moulding of a relatively flexible material. The body 1 comprises a base 2 and two like parts, each one of which has a jaw 5 facing the other for contacting the element 4 to be fastened and pivoted at 12, as well as an arched tongue 6 capable of being locked to the jaw at 8 and maintaining the operative position thereof e.g. by free ends 9 engaging in notches 7.

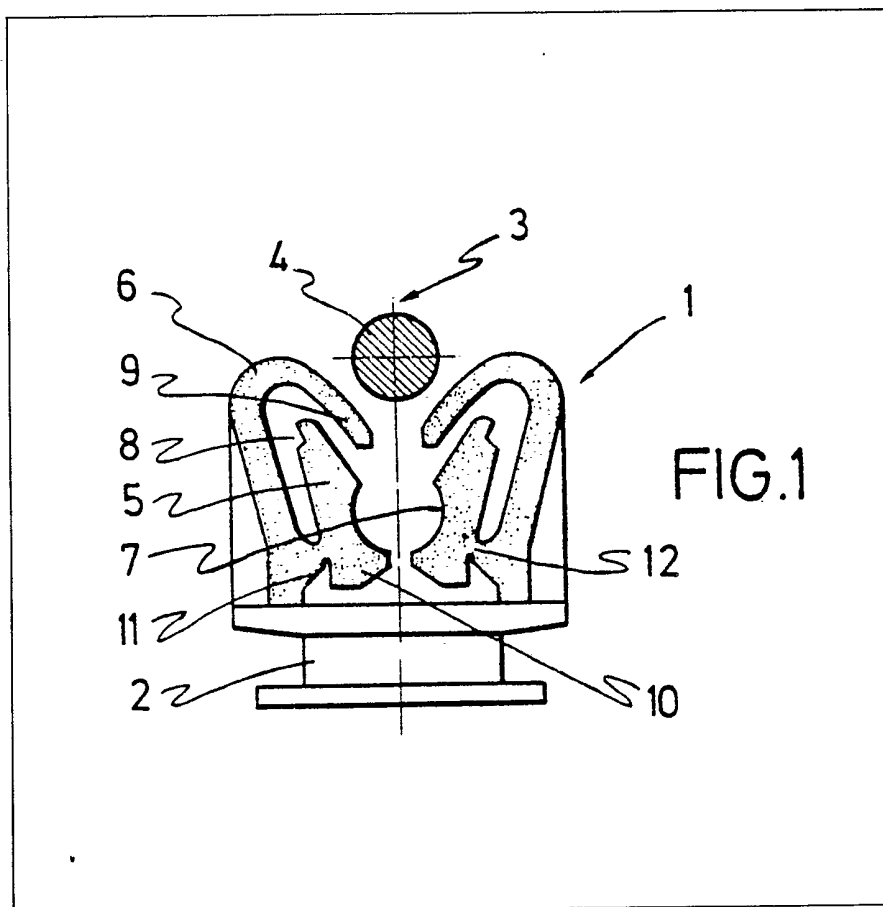


FIG. 1

The drawings originally filed were informal and the print here reproduced is taken from a later filed formal copy.

1/2

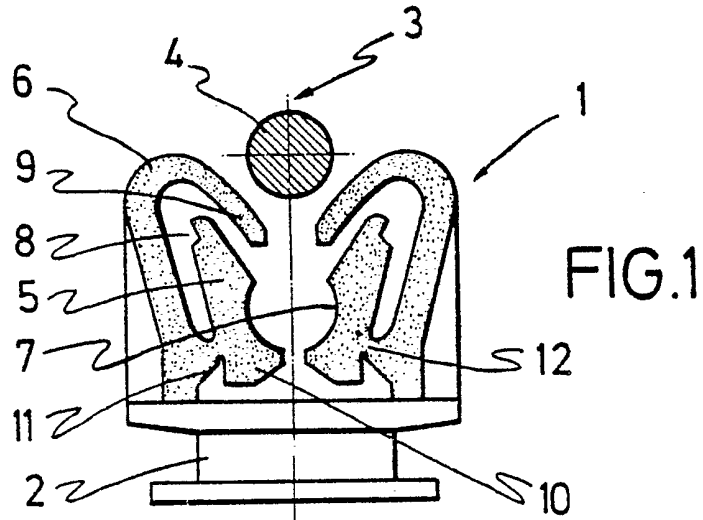


FIG. 1

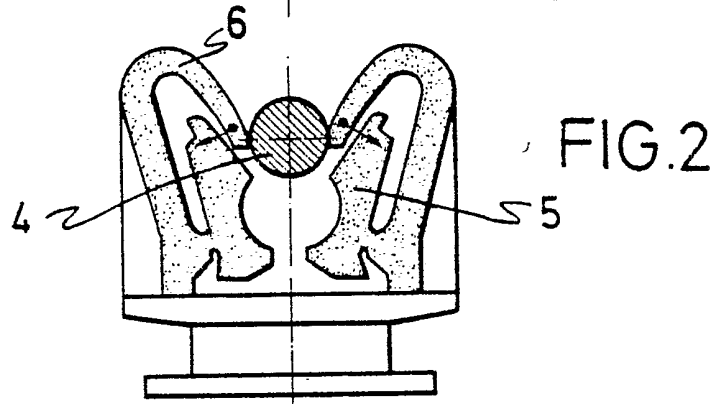


FIG. 2

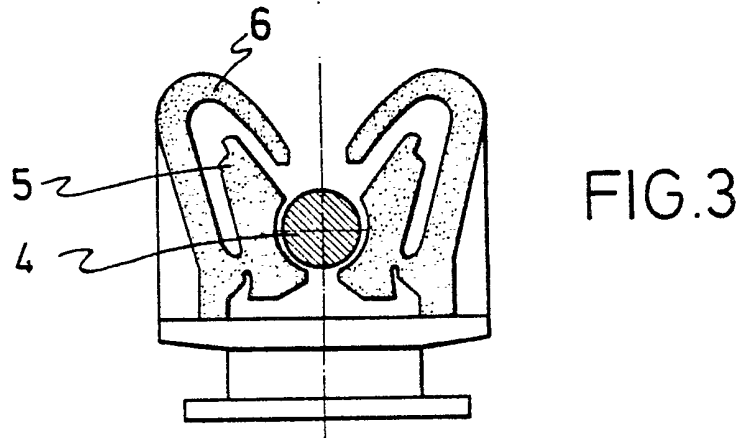
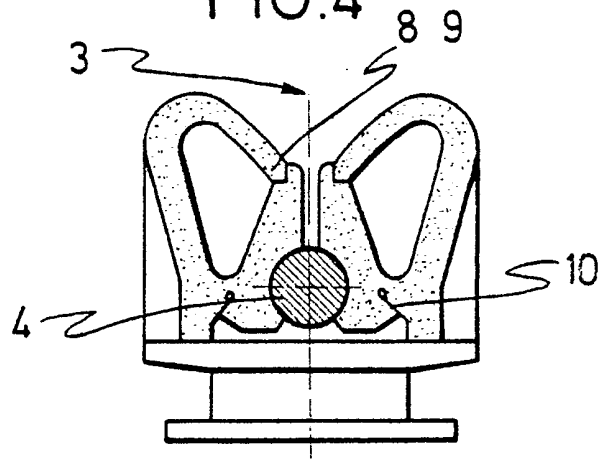
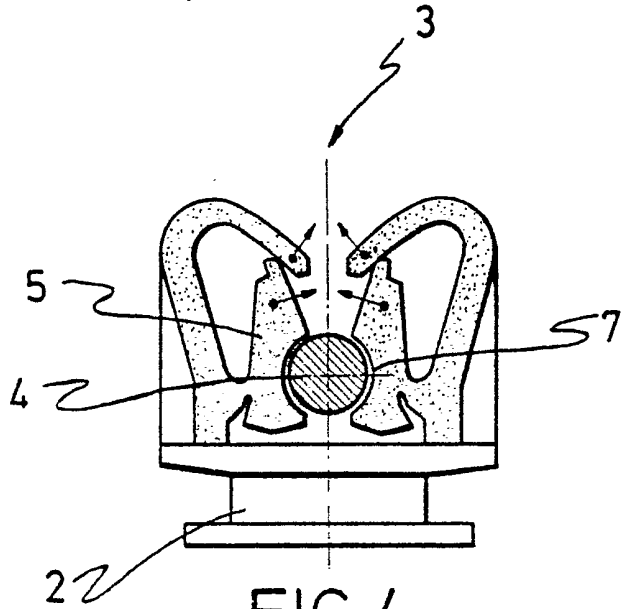


FIG. 3



SPECIFICATION

Holder devices

5 The present invention refers to a holder device which is a relatively flexible plastics element having diverse uses. It can be used in the fastening of tubes and bars, either as a guiding element, or merely as an intermediate element for the joining of any type
10 of panel to an assembly incorporating a bar where it can act with the mentioned plastics element or holder.

Basically, the holder device of the instant invention consists of an integral body comprising two
15 identical parts, operationally complementary to each other. Each one of these parts has a prismatic jaw facing each other which, under pressure, contact the element to be fastened. To maintain this pressure invariable during operation of the device, each one
20 of the previously mentioned complementary parts of the holder is provided with flexible tongues capable of being firmly locked in each one of the jaws. Thus, the operative position of the holder is maintained as long as the tongues are not withdrawn from the
25 zones where they are engaged with the jaws.

Since the device can be used to fasten circular sectioned bodies, the active or working faces of the jaws preferably have concave curved recesses which will be arched portions corresponding to the circum-
30 ferential perimeter of the element to be fastened. For the pressure exerted by these jaws to be fully effective, said recesses have unstressed dimensions slightly smaller than the circumferential perimeter of the tube or bar to be fastened.

35 Each one of the parts of the holder device is symmetrically disposed to one of the axes of the bar or tube to be fastened, said parts being preferably joined to a common base from which there projects a lug, by means of which the holder device can be
40 fixed, for example, to a surface.

For a better understanding of the invention, reference is made to the accompanying drawings wherein, by way of illustration and not limiting, the following is represented:

45 *Figure 1* represents schematically an elevational view of one holder device embodying this invention, in a completely inoperative position, i.e. before the bar or tube to be fastened contacts said holder.

Figures 2 to 5, both inclusive, represent elevational views of the holder device corresponding to the various operating phases thereof on the bar or tube to be fastened. *Figures 2 and 4* illustrate, by means of arrows, the movement to which both the jaws and the tongues thereof are subjected due to the influ-
55 ence of the bar or tube to be fastened. *Figure 5*, specifically, illustrates the holder device once the tube or bar has been firmly fastened.

According to the foregoing and as can be seen, the holder device is characterised in that it consists
60 of an integral body 1, comprised of two identical parts, operationally complementary to one another, which are joined to a common base 2, by which the device can be fixed to a support.

Each one of the identical parts, operationally
65 complementary to one another, is disposed symmet-

rically to the axis 3 constituting the line to be occupied by the tube or bar 4 for the subsequent fastening thereof by the device.

70 Each one of the mentioned parts is mainly comprised of a prismatic jaw 5 and an arched tongue 6, by means of which tongue these two complementary parts are joined to the common base 2 of the device.

At the active working face of the jaw 5 there is a
75 concave curved recess 7, and at the top, opposite said recess 7, there is a step or depression 8 in which the tongues 6, through the sharp ends 9 thereof, can engage in use.

At the bottom, the prismatic jaw 5 extends into a
80 lug 10, which in use can abut an inclined face 11 with which each of the tongues 6 are provided, when the bar or tube 4 is firmly fastened.

Although the operation or functioning of the holder device can practically be deduced from the
85 drawings, this operation will now be described.

When the holder device, as illustrated in *Figure 1*, is at rest, the tube or bar 4 is first aligned between the two parts constituting the device. According to
90 *Figure 2* the tube or bar 4 enters between the two complementary parts of the device, causing an outward displacement of the tongues 6 so that the tube or bar 4 can enter the space between the recesses 7 of the jaws 5, which forms the seat for such tube 4.

Once the tube or bar 4 is housed between the jaws,
95 as illustrated in *Figure 3*, pressure on the tube or bar 4 towards the base 2 causes the jaws 5 to be pressed in the direction of the arrows, as illustrated in *Figure 4*. When the jaws 4 are pressed, the recesses 7 thereof contact the side surfaces of the tube or bar 4. This movement of the jaws 5, besides causing the tube or bar 4 to be conveniently surrounded, auto-
100 matically causes the sharp ends 9 of each one of the tongues 6 to fit firmly into the steps 8 of the jaws 5. Thus, the tube or bar 4 is firmly fastened, as
105 illustrated in *Figure 5*.

The stable or operative position of the holder device is fixed not only because the tongues 6 and the jaws 5 are locked, but also because a support or
110 abutment is produced between the lugs 10 and the inclined faces 11, when the device is closed.

It should be pointed out that the opposite rocking movement of each one of the jaws 5 to hold the tube or bar 4 can take place due to the weak points 12,
115 which are the only joining points between the jaws 5 and the corresponding tongues 6.

CLAIMS

120 1. Holder device constituted from an integral body obtained by the moulding of a relatively flexible material, and preferably designed to fasten cylindrical tubes and bars, essentially characterised in that the body comprises two like parts, operationally complementary to each other, each one of which has a prismatic jaw facing each other for contacting the element to be fastened, as well as an arched tongue capable of being locked in the jaw and maintaining the operative position thereof.

130 2. Holder device according to claim 1, characte-

rised in that the jaws of both parts have, in their working face, a concave curved recess which together will surround the tube or bar to be fastened, with unstressed dimensions which will be smaller than the circumferential perimeter of said tube or bar.

3. Holder device according to claim 1 or claim 2, characterised in that the free end of each arched tongue is sharp so as to be positioned firmly in steps made in the upper part of the jaws and on the face opposite to that provided with the concave recesses.

4. Holder device according to any of claims 1 to 3, characterised in that the joining zones between the jaws and the arched tongues are weak points which permit same to be bent.

5. Holder device according to any of claims 1 to 4, characterised in that the arched tongues are joined to a common base and have an inclined face to abut a lug which projects from the lower part of each jaw.

6. A holder device of integral construction of resilient plastics material, for gripping a rod, comprising a base and two identical gripping parts on opposite sides of a central plane, each gripping part comprising a jaw and a tongue, each jaw having a recess facing the said plane and being pivotally connected to the remainder of the device, the axes of the recesses and the axes of pivoting being all parallel to each other and to the plane, and each jaw having a notch facing away from the base and away from the other jaw, and each tongue being curved around the respective jaw and having a flexible free end remote from the base and directed towards the base, so that a rod of appropriate cross section can be passed between the free ends of the tongues and enter the recesses in the jaws, and can be urged towards the base to cause the jaws to rock until the tongues make latching engagement with the respective notches.

7. A holder device according to claim 1, substantially as described with reference to the accompanying drawings.

New claims or amendments to claims filed on 9.4.80.
Superseded claims 1-7.

45 New or amended claims:-

1. Holder device constituted from an integral body obtained by the moulding of a relatively flexible material, and preferably designed to fasten cylindrical tubes and bars, essentially characterised in that the body comprises two like parts, operationally complementary to each other, each one of which has a prismatic jaw facing each other for contacting the element to be fastened, as well as an arched tongue capable of being locked in the jaw and maintaining the operative position thereof, the joining zones between the jaws and the arched tongues being weak points which permit same to be bent.

2. Holder device according to claim 1, characterised in that the jaws of both parts have, in their working face, a concave curved recess which together will surround the tube or bar to be fastened, with unstressed dimensions which will be smaller than the circumferential perimeter of said tube or bar.

3. Holder device according to claim 1 or claim 2, characterised in that the free end of each arched tongue is sharp so as to be positioned firmly in steps made in the upper part of the jaws and on the face opposite to that provided with the concave recesses.

4. Holder device according to any of claims 1 to 3, characterised in that the arched tongues are joined to a common base and have an inclined face to abut a lug which projects from the lower part of each jaw.

5. A holder device of integral construction of resilient plastics material, for gripping a rod, comprising a base and two identical gripping parts on opposite sides of a central plane, each gripping part comprising a jaw and a tongue, each jaw having a recess facing the said plane and being pivotally connected to the remainder of the device, the axes of the recesses and the axes of pivoting being all parallel to each other and to the plane, and each jaw having a notch facing away from the base and away from the other jaw, and each tongue being curved around the respective jaw and having a flexible free end remote from the base and directed towards the base, so that a rod of appropriate cross section can be passed between the free ends of the tongues and enter the recesses in the jaws, and can be urged towards the base to cause the jaws to rock until the tongues make latching engagement with the respective notches.

6. A holder device according to claim 1, substantially as described with reference to the accompanying drawings.