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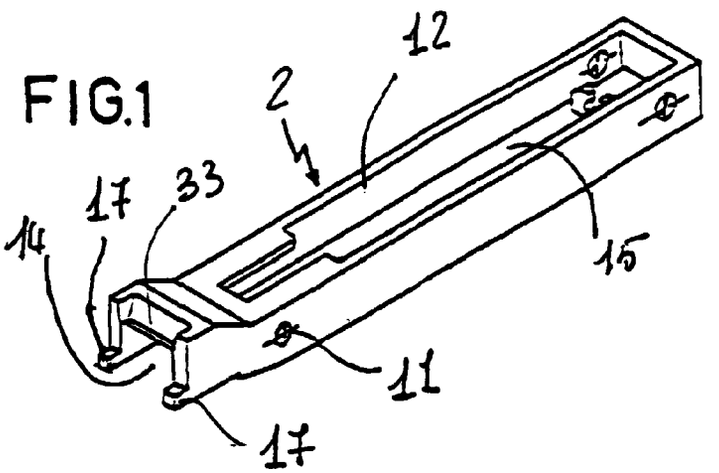
(54) Plastic magazine of improved structure for stationery staplers

(57) Description of a plastic magazine far staplers characterised in that its front end, which includes both a front lapel (32), single-part or two-part, and the final portion (14) of the floor (15), consists of a metal mouth (5), basically box-shaped and open on the upper side and on the near side, and provided with fasteners (6) adapted for connecting it externally to the body of the plastic magazine, leaving its inside walls with no lining.

FIG.1



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Description

[0001] The present invention relates to the hand operated stationery staplers adapted for stapling paper or similar soft materials by means of metal staples. The magazines in the known staplers can be metal magazines, plastic magazines or plastic magazines internally steel-clad for the entire length of the staple strip.

[0002] Magazines of the first type imply structural and economic problems because of their weight and cost, respectively. In the second case, and taking wear into account, the problem consists in that the staples must move forward astride of trackways set in the magazine in order to avoid slashes in the final part of the plastic floor which is violently hit when the staples are separated from the strip; the setting of said trackways means significant troubles both structural and economic in the manufacturing of the magazines which cannot be of the simple tubular type but must be of the box type with ceiling; moreover the peen that pushes the staples on the anvil must be operated vertically and not radially by the hammer lever in order to prevent it from rubbing against the plastic front lapel so that an additional part and an additional connection are needed, this implying an increase in the cost.

[0003] In the third case the problem is structural and relates to the metal lining of the inside walls. The length of the metal lining must be the same as that of the staple strip since a shorter lining should be necessarily recessed and so it could create a lowered step which would increase the inner transverse space of the magazine thus affecting the precise positioning of the staples under the hammer peen: this structural solution of making the lining as long as the staple strip could be technically and economically acceptable in the case of short magazines for 50 staples, but not for the modern long magazines carrying 150-210 staples.

[0004] It is an object of the present invention to provide an economical plastic magazine which is resistant to the wear caused by the staples and the peen and the structure of which overcomes the inconveniences mentioned above.

[0005] In order to achieve it, the invention suggests a plastic magazine for staplers characterised in that its front end consists of a metal mouth which includes both a front lapel, single-part or two-part, and the final portion of the magazines' floor, and which is provided with fasteners adapted to connect it to the plastic portion of the magazine, leaving its inside walls free from lining so that the exact transverse space needed for the run of the staples is not altered.

[0006] According to a different preferred characteristic of the invention, the fasteners of said metal mouth are made of two side elastic bars to be fit on the relative prongs on the external walls of the magazine.

[0007] According to an additional preferred characteristic of the invention, said metal mouth presents two slits in the front lapel for receiving the small driving horns integral with the end of the magazine walls to which the metal mouth is connected.

[0008] According to an additional preferred characteristic of the invention, said metal mouth presents a floor which is preferably 12 mm long or shorter in order to reduce as far as possible the interruption in the connection between the plastic walls of the magazine.

[0009] Additional characteristics and advantages will become clear from the following description which refers to the appended drawings, provided as non-restrictive embodiment, in which:

- figure 1 is a perspective view of the plastic magazine without the metal mouth;
- figure 2 is a longitudinal section of the plastic magazine with the metal mouth engaged on it;
- figure 3 is a cross-section of the front end of figure 2;
- figure 4 is a prospective view of the metal mouth, and
- figure 5 is a view of a stapler with one of the possible preferred types of the magazine, with the metal mouth snapped.

[0010] With reference to the figures, it is possible (fig.5) to notice a stapler 1 equipped with a magazine 2. The front end of the magazine 2 consists of a metal mouth 5 (figures 2 to 5), snapped to the plastic portion of the magazine by means of bars 6, provided with holes 7, hooked on the prongs 11 on the external walls 12, at the front end of the magazine.

[0011] In figure 1, where one of the possible realisations of the final portion 14 of the sliding floor 15 for the staples is shown, it is also possible to notice that said floor has been cut and replaced with the floor of the mouth 5. The plastic walls 12 of the magazine 2 (figure 1) remain untouched with no inside metal lining and end in two small horns 17 to be driven into the slits 25 of the metal mouth 5.

[0012] With special reference to figure 2 and 3, it is possible to see a vertical slit 30 (for the sliding of the peen of the hammer lever) between the front lapel 32 of the mouth 5 and the edge 33 of the ceiling 35 of the magazine; it is also visible, indicated by 37, the conventional propulsor to move the staples forward.

[0013] The mouth 5 presents (figure 3) a metal floor 38 that, after assembly of the mouth 5 on the magazine 2, is slightly lower than the plastic floor 15 of the magazine 2 on which the staples slide, so that there is no obstacle to the sliding of the staples.

[0014] It is possible to observe in the figures, and especially in figure 5 which is a view of the stapler 1, that the mouth 5 is intended to be engaged on the magazine 2 externally, so that the inside surface of plastic walls 12 of the magazine can remain untouched and free from lining; it can also be noticed, especially in figure 3, that the mouth 5 is provided with a very short floor 38, preferably 12 mm long or shorter than that, in order

to reduce as far as possible the interruption of the floor connecting the plastic walls of the magazine.

Claims

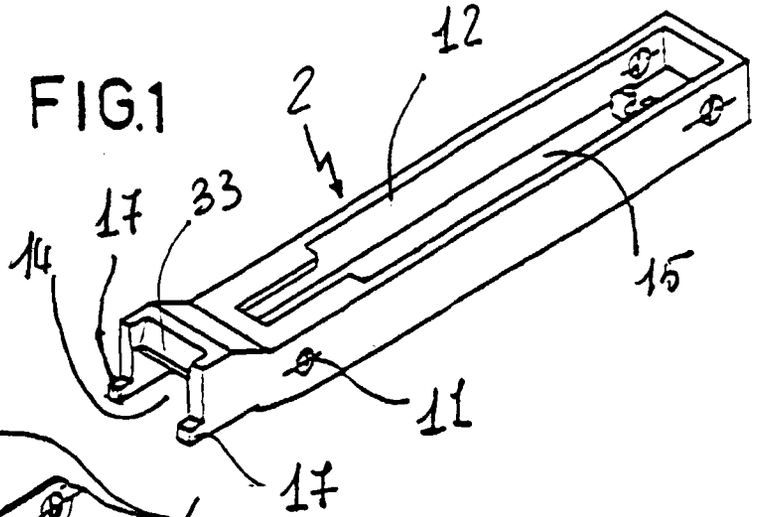
1. Plastic magazine for staplers characterised in that its front end consists of a metal mouth (5), including both a front lapel (32), single-part or two-part, and the final portion (14) of the floor (15) for the sliding of the staples, and is provided with fasteners (6) adapted to connect it to the plastic portion of the magazine, leaving its inside walls (12) of the magazine itself free from lining so that the exact transverse space needed for the run of the staples is not altered.

2. Magazine as claimed in claim 1 characterised in that the fasteners of said metal mouth consists of two side elastic bars (6) to be fit on the relative prongs (11) on the external walls (12) of the magazine.

3. Magazine as claimed in claim 1 characterised in that the metal mouth presents two slits (25) in the front lapel (32) for receiving the small driving horns (17) integral with the end of the magazine walls to which said metal mouth (5) is connected.

4. Magazine as claimed in claim 1 characterised in that the metal mouth (5) presents a floor (38) which is preferably 12 mm long, or shorter than that, in order to reduce as far as possible the interruption of the floor connecting the plastic walls (12) of the magazine.

FIG.1



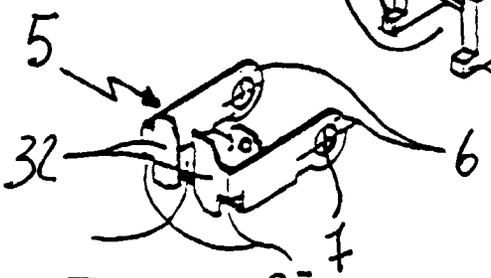


FIG.4

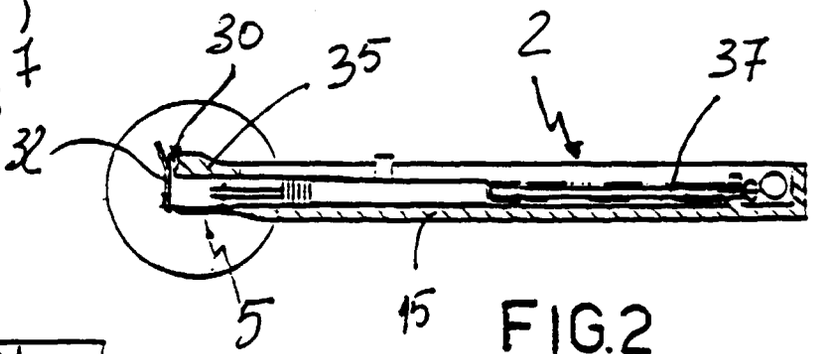


FIG.2

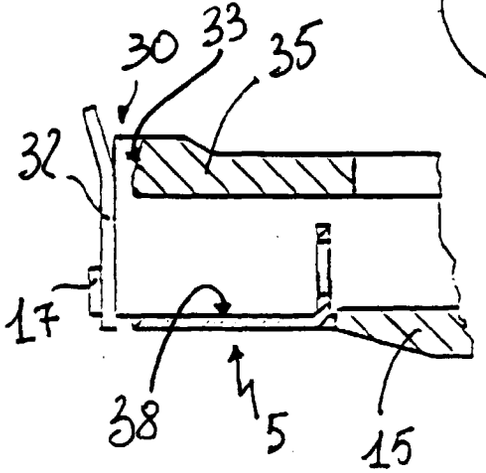


FIG.3

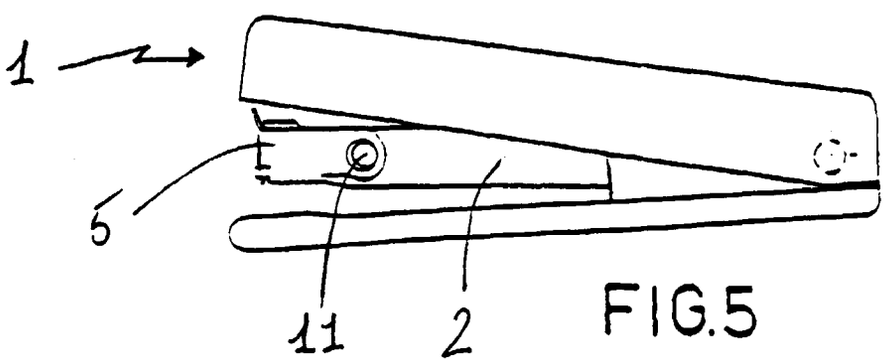


FIG.5