

(12)

EUROPEAN PATENT APPLICATION

(21) Application number: **86106162.0**

(51) Int. Cl.⁴: **B 41 F 13/28**

(22) Date of filing: **06.05.86**

(30) Priority: **09.05.85 ES 286618 U**
11.11.85 ES 290242 U

(43) Date of publication of application:
20.11.86 Bulletin 86/47

(84) Designated Contracting States:
AT BE CH DE FR GB IT LI LU NL SE

(71) Applicant: **Pestana Enriquez, Venancio**
General Solchaga, parc. 105
E-47008 Valladolid(ES)

(72) Inventor: **Pestana Enriquez, Venancio**
General Solchaga, parc. 105
ES-47008 Valladolid(ES)

(74) Representative: **Prato, Roberto et al,**
c/o Ingg. Carlo e Mario Torta Via Viotti 9
I-10121 Torino(IT)

(54) **Clasping device for portfolio interchangeable-sheets.**

(57) Clasping device for portfolio interchangeable-sheets, embodied in only one piece (1) made of plastic material which is composed of a laminate strip properly fixed to the inner face of one of the portfolio covers, rising from the said strip two or more projections (2) like open clamps closely to one of the longitudinal edges of the said laminate strip (1), whilst the same number of projections or pivots (3) having a less width rise closely to the another longitudinal edge, the said projections (3) or pivots being arranged closely to each projection (2) constituting the clamps, preferably in different planes, with the particularity that the free ends (4) of the clamp (2) and pivot (3) pertaining to each couple are overlaped, joined or fastened each other and slightly out of phase with the separation defined between the planes pertaining to each said projection (clamp and pivot) of each said couple, being provided in addition that the strip (1) has in the centre and longitudinally a weakening line (5) which will correspond to another provided in the corresponding portfolio in which such a strip (1) is applied in order to allow the portfolio covers to be turned until 45° in a contrary sense to the closure of the said portfolio and to attain therefore the separation of the free overlaped ends (4) of the clamps (2) and pivots (3) to facilitate the change of the filing sheets.

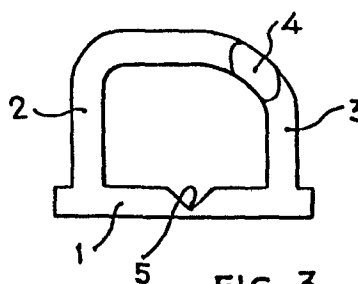


FIG. 3

This invention relates to a clasp device for portfolio interchangeable-sheets, which renders many advantages in respect of the known and used iron-works and mechanisms for similar purposes.

The clasp device for which protection is being sought carries out the same purposes than those carried out by the conventional - paper-filing portfolios which are called ring portfolios which allow to interchange sheets or documents filed in the said portfolio - - since the said sheets are held or clasped by rings which are manually open and closed, being possible to hold in or loose sheets because of having at their inner edge corresponding holes to pass the arms which define the rings concern.

As it is known, the iron-works or ring mechanisms cited above are fully made of metal although they may also be made of plastics and they are set up from a strip which is fastened by proper means to one of the two covers of which the portfolio is composed by the - inner face and near to the corresponding back defined between both covers, having also the said strip two or more rings which may be open and closed at will to effect the filing-sheets change, and - which rings are associated to elements such as bars, springs, etc which allow to hold the rings closed when no action is exerted -- thereon or allowing such rings to remain open when they have been acted towards the said position. Such elements of bars, springs, etc. are located below, although not necessarily, the strip, that is to say they are covered.

In this kind of mechanisms or iron-works, the joining or closing of the rings is attained by the facing of the corresponding ends to the two arched arms of which each ring is composed, being both arms in the same plane to allow the ring to register the sheet - holes.

In the first place, the costs for such mechanisms or iron-works are considerably high what will logically rise the price of the



filing portfolio and, on the other hand, the opening and closing of the rings will require a considerable attention and/or physical force since it is necessary to handle them with the fingers of the hand to effect such opening and/or closing. They also present the drawback that as a consequence of being the arms of each ring arched, it is required that the width of the portfolio back be considerable in order to allow the closure of the said portfolio since the obstacle which supposes the contour of the rings should be overcome in such a closure.

These and other problems and drawbacks noticed in the ring filing portfolios have lead the applicant to conceive a new kind of clasping or fastening mechanism or device for interchangeable sheets which is much cheaper to be manufactured and therefore the price of the portfolio and much simpler to be handled without any force and very - - easily.

Such clasping device is set up in only one piece of plastics which requires no kind of mechanism for its opening and closing. The said piece is composed of an elongated strip which is fixed by conventional means on the inner face of one of the covers of the portfolio, being located in the same way than the metal strip of the above-mentioned ring mechanisms.

The said strip has arched projections like open clamps arranged closely to one of the longitudinal edges of the said strip whilst other projections or pivots having less width and arranged in different plane with respect to the prior ones have been provided closely to the another edge, that is to say each projection like an open - clamp is near to the another projection having less width but in different planes. It is to be pointed out that the said projections which constitute the rings may also be in the same plane.

Each clamp and pivot couple remain with their free ends properly overlaped, joined or fastened registering therewith the different

holes or bores provided with this purpose in the sheets to contain or file.

Consequently, the basis of the device of the invention is constituted by a piece formed by a thin proper-length strip which is fixed to all the length of the portfolio and near to the back thereof. The said strip presents a weak longitudinal zone which registers with another provided in the portfolio to allow by a light force the covers of the portfolio to tend to turn in contrary sense to the closure and to be able thus to open the clamps to change sheets.

Apart from the already said economic save which the object of the invention supposes as well as the easy handling thereof and the comodity for the user, the decrease of the back width of the portfolio should be pointed out since it may be reduced about the half in respect of the conventional portolios, removing thus the problem arisen from the hight of the conventional rings to work easily.

In summary, the device which is being described presents the -- following essential characteristics:

- It is embodied in only one piece made of plastics.
- Such a piece takes the form of a laminate strip.
- The said laminate strip is fixed by glue, adhesive, etc. to the inner face of one of the portfolio covers.
- The said strip presented a weak central line which is longitudinal and is embodied like a hinge.
- Closely to the longitudinal edges of the strip there are -- different-length projections which are out of phase each other determining the retaining means of the interchangeable sheets.
- To interchange sheets it is necessary to open the portfolio about 45° to distance the ends of the projection couples and allow thus to insert or take out the sheets.

In another embodiment of the device, the projections are equal each other or very similar.

Also, in this second embodiment, the strip with the projections may be of metal or any other proper material, being capable of getting fixed or adhered to the portfolio cover or forming merely one piece with the portfolio.

In accordance with this way of embodiment, the portfolio opening should be made according to about 180° width to be able to change the corresponding sheets.

All the above-mentioned characteristics and advantages as well as others derived from the object of the invention will be more easily understood at the sight of the attached drawings which in a merely orientative but not limitative way show the following:

Figure 1 shows a lateral elevation view of the strip with the projections, constituting a preferred way of embodiment of the device of the invention.

Figure 2 shows a perspective view of the strip with the projections as represented in figure 1.

Figure 3 shows a view by one of the ends of the strip represented in the previous figures in which the projections which will embody the clasp and holding means for the sheets.

Figure 4 shows a perspective view of the strip which embodies the device, in a second form or variant of embodiment.

Figure 5 shows a section view in accordance with the plane through the line V-V of the previous figure.

Figure 6 shows a view in detail of the projections of the strip corresponding to the way of embodiment represented in figures 4 and 5.

Figure 7 shows a portfolio portion with the device corresponding to the way of embodiment represented in figures 4, 5 and 6.

Concerning to the above-mentioned figures 1, 2 and 3 the device which is the object of the present invention is composed of a laminate strip (1) made of proper plastic material which will be fixed on the corresponding portfolio near to the back of the portfolio, that is

to say in the inner face of one of the covers of the said portfolio. From the said laminate strip (1) which is rectangular and having - proper width and length to its application, two or more arched projections rise which determine a kind of open clamps (2) which rise closely to one of the longitudinal edges of the strip (1) whilst - other less-width projections which will be named pivots (3) rise closely to the another longitudinal edge, the pivots being near to the prior ones but in different planes as it may be appreciated in figures 1 and 2, being able to remain in the same plane as previously said.

The free ends (4) of each projection couple formed by an open - clamp (2) and a pivot (3) are overlaped, fixed or fastened but not together since, as previously said, the projections rise preferably as per different planes.

The laminate strip (1) presents a weakening central longitudinal line (5) which will register with another provided with this purpose in the portfolio.

The filing or interchangeable sheets will be housed through their holes or bores along the free end of the pivots (3) whilst if it is wished to change such sheets to pass them on the another side, they will be introduced by other holes made thereon through the free end of the open clamps (2) whereby the easiness and saving-time to change sheets will be evident in respect of ring mechanisms.

Regarding the weakening line (5), it is provided to allow to turn the portfolio covers till a 45° angle but in contrary sense to the closure of the said portfolio in order to cause such covers to be separated and attain therefore the separation of the ends (4) of the clamps (2) and pivots (3) and to allow the loading and unloading of the sheets without encumbrances and with comodity.

Figures 4 to 7 show a second way of embodiment of the device which is also embodied from a rectangular strip (1a) with its weakening

central longitudinal line (5a). Such a strip (1a) may be made of metal or any other material and is provided to be fixed by adhesive or any other known means to the inner face of one of the two covers (6) of a portfolio. The said strip (1a) may be a part of the said cover (3), that is to say, may form only one piece with the latter which would be obtained in a moulding process.

The strip (1a), in this second way of embodiment, presents the projections (2a) and (3a) provided closely to the longitudinal edges of the said strip (1a).

Such projections are usually distributed in couples in such a manner that those of each couple rise from a zone near to one and another longitudinal edge, being both of them out of phase each other some distance and faced in opposition.

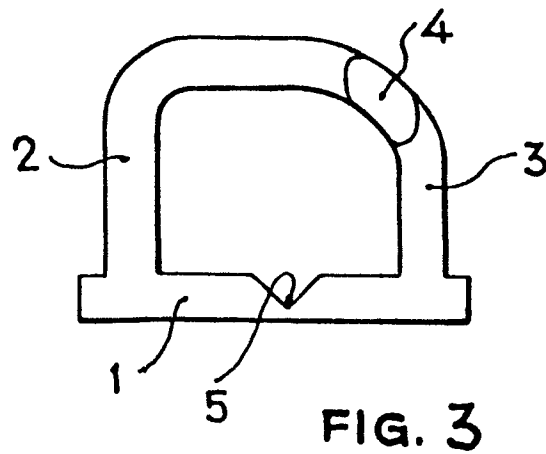
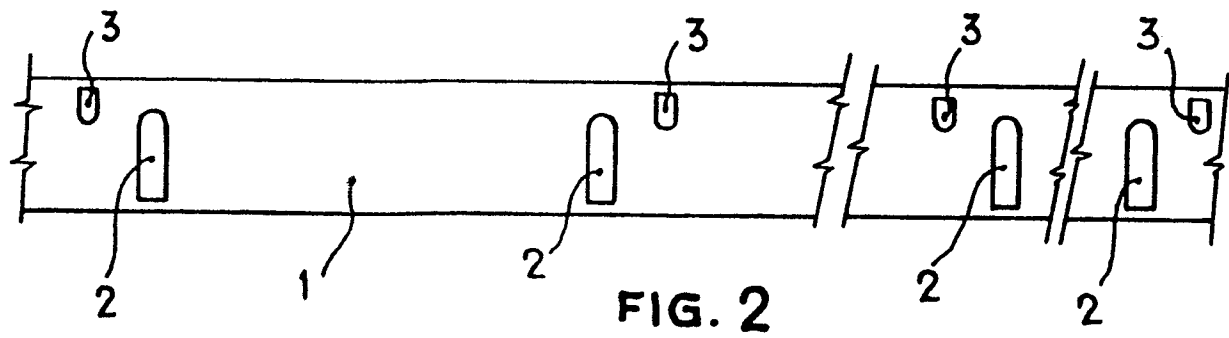
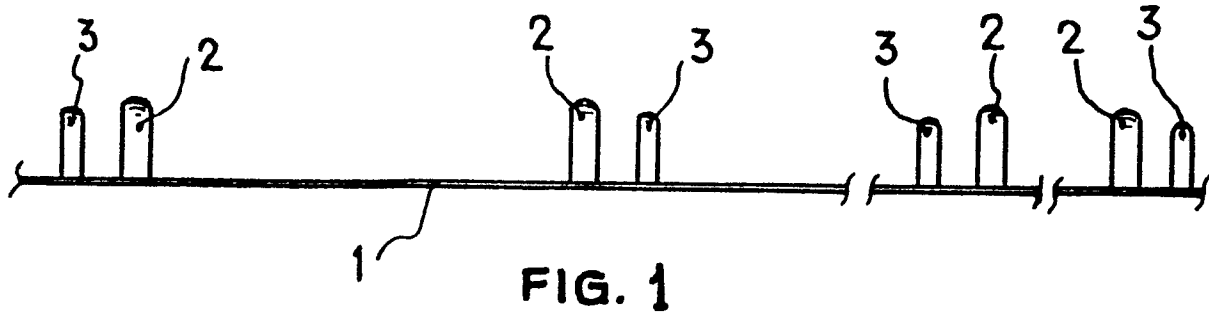
The strip (1a) will be arranged as it may be appreciated in figure 7 whereby to introduce or get out the interchangeable sheets (7) it will be necessary to open the portfolio until its covers (6) are practically joined behind, that is to say, to make an opening of about 180° in order that the projections ends remain at distance and be possible to introduce and/or get out the sheets (7) which in their storage will be housed by their holes in one of the projections (2a) or (3a) and retained by the another projection (3a) or (2a) to impede such sheets (7) to go out themselves when the portfolio is open, being all this applicable to all the couples of projections (2a) and (3a) in the strip (1a).

1.- Clasp device for portfolio interchangeable-sheets, being provided to meet the purpose of holding the sheets in the inner of the filing portfolios which are named changeable ring portfolios, and being mounted in the same position than the conventional ring mechanism of the said portfolios, essentially characterized in - that it is embodied in only one piece made of plastic material - which is composed of a laminate strip properly fixed to the inner face of one of the portfolio covers, rising from the said strip two or more projections like open clamps closely to one of the longitudinal edges of the said laminate strip, whilst the same number of projections or pivots having a less width rise closely to the another longitudinal edge, the said projections or pivots being arranged closely to each projection constituting the clamps, preferably in different planes, with the particularity that the free ends of the clamp and pivot pertaining to each couple are overlapped, joined or fastened each other and slightly out of phase with the separation defined between the planes pertaining to each said projection (clamp and pivot) of each said couple, being provided in addition that the strip has in the centre and longitudinally a weakening line which will correspond to another provided in the corresponding portfolio in which such a strip is applied in order to allow the portfolio covers to be turned until 45° in a contrary sense to the closure of the said portfolio and to attain therefore the separation of the free overlapped ends of the clamps and pivots to facilitate the change of the filing sheets.

2.- Clasp device in accordance with claim 1, characterized in that the projections and pivots arising from the strip are practically equal each other and with an arched profile, being such projections faced in opposition by couples and those of each couple out of phase each other whilst the weakening longitudinal line constitutes a kind of hinge which allows to open the covers in accordance

with an angle of about 180° and the corresponding separation of the projections of each couple to facilitate to change the sheets.

3.- Clasp device in accordance with claim 2, characterized in that the strip having the approximately equal arched projections forms only one piece with the portfolio cover being obtained the - monopiece whole by the corresponding moulding.

$\frac{1}{2}$


2/2

