June 14, 1966 B. M. C. GAUCHE 3,255,758

SUSPENDED FILES

Filed May 8, 1963

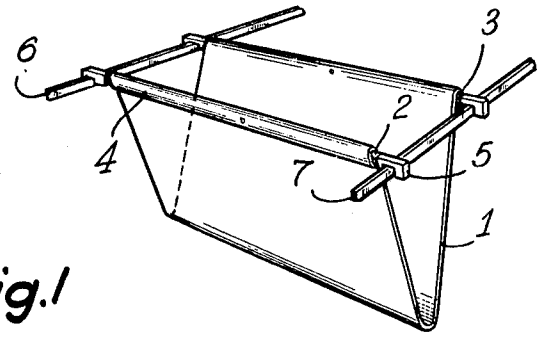


Fig. 1

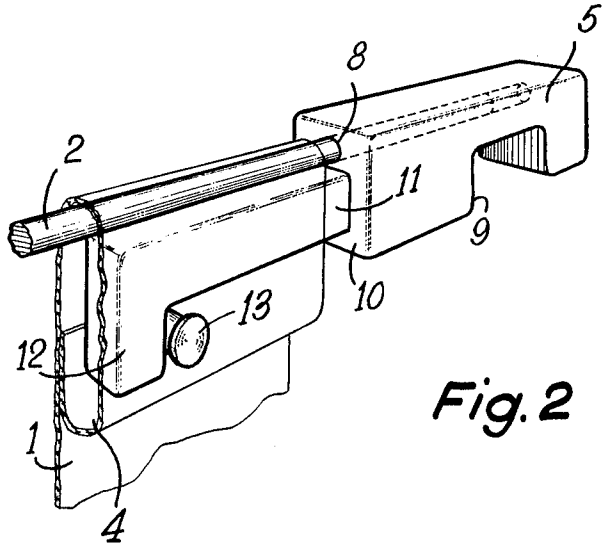


Fig. 2

Fig. 3

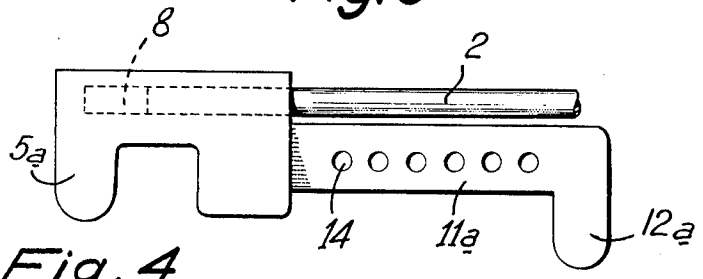
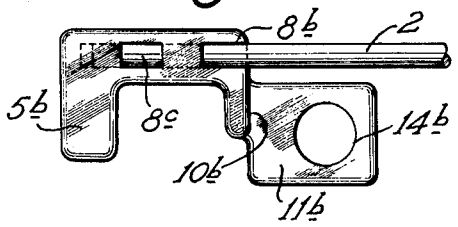


Fig. 4



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3,255,758

SUSPENDED FILES

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7 Claims. (Cl. 129—16.7)

This invention relates to suspended files, which are in effect pouches into which the documents to be filed can be inserted. Said pouches are supported on hooks at each end of bars to which the upper edges of the sheet material of the pouches are attached, said hooks resting on side rails.

To impart the necessary rigidity to such bars, the same are often made of metal strip material suitably cut into the shape of hooks at each end, each bar being engaged in a loop in the sheet material which is formed by folding back the free edge of the sheet material.

In order to lower the cost of such an assembly, bars of this kind can alternatively consist of round wires having extremities arched into the form of hooks.

To impart the necessary stability to the hooks in the plane of the corresponding sheet material, a suitable portion of such a bar is provided with a bend which prevents the bar from rotating with respect to said sheet material, either by the engagement of such bent portion into the corresponding loop or by any other convenient anchoring means of the lever arm formed thus on said bar.

A chief object of the present invention is to further simplify structures of this type, particularly by allowing for the use of a straight ordinary wire or like extrusion which is merely cut approximately to the required length.

To this end, in accordance with the present invention, there is associated with the extremity of a rod preferably consisting of a plain straight bar, a hook which is fitted over the free extremity thereof, said hook being provided with an extension adapted to be rigidly connected to the sheet material of the corresponding file with the desired angular setting.

In a preferred embodiment, such a hook and its extension are constituted by a synthetic plastic moulding.

The back of such a hook is provided with a hole, which may be blind if desired, into which the extremity of the rod is inserted with endwise play, said hole being preferably positioned above said extension.

An abutment shoulder is preferably formed about the root line of the extension provided for retention and angular keying with respect to the hook proper, in order to prevent the same from tending to withdraw into the file.

In one specific embodiment, said extension includes a portion thereof set at right angles, behind which is inserted a securing element which rigidly unites the corresponding edge of the sheet with a folded-back portion thereof, said securing element thus fulfilling the dual function of sealing said folded-back portion and preventing extraction of said hook.

In an alternative embodiment, said securing element, which is preferably removable, is adapted to cooperate with retention means of said extension, which means can be selected from a row thereof, whereby to impart adjustability to said hook and enable it to be adapted to variously spaced supporting rails.

Such a method of construction is particularly simple and economical and offers great flexibility in utilization.

The association between the rod and the fitted hooks can be implemented either with the two free edges of the folder, or with the middle crease thereof, which crease may be suitably arranged and possibly folded back to form a folder suspended from its closed end and opening downwardly—a technique which is used in particular when the documents to be filed are secured in the suspended files by means of a fixing device rigidly connected thereto.

A file indexing and identification system can be incorporated by imparting to the hooks a suitable identification shape or color, since plastics easily lend themselves to coloring and to ready variations of shape, or alternatively by associating fitted indicator means which may be removable or not.

The description which follows with reference to the accompanying drawing, which is filed by way of example and not of limitation, will give a clear understanding of how the invention can be carried into practice.

In the drawing filed herewith:

FIG. 1 shows in perspective the configuration of a suspended file with hooks fitted to the extremities of the suspension rods;

FIG. 2 shows on an enlarged scale the association of a rod and such a fitted hook, the corresponding extremity of the sheet forming the file being assumed to be transparent;

FIG. 3 is a side view of an alternative embodiment of said hook; and

FIG. 4 is a similar view of yet another mode of construction.

In the drawing is shown a suspended file which consists of a sheet **1** made of paper, flexible cardboard or like material, forming a pouch the upper edges of which are folded around two rods **2** and **3** to form loops or folds **4** which define tunnel-like passageways. At the extremities of rods **2** and **3**, which project from folds **4** are fitted downwardly open hooks **5** adapted to run on side rails **6** and **7** forming part of the filing cabinet.

Rod **2** consists of a plain round wire section. Hook **5** includes a relatively thick body portion embodying a blind hole **8** into which is inserted with endwise play the corresponding extremity of rod **2**. The lower portion of the hook body **5** is provided with a notch **9** adapted to fit over rail **7**. From the inside face **10** of the hook body projects a relatively slim extension **11**, thus leaving a shoulder portion on said face **10**. Extension **11**, the breadth of which is barely greater than the diameter of wire **2**, penetrates into fold **4**. On its outer extremity, said extension is provided with a foot **12** extending at right angles to the extension. The foot **12** forms a lever arm which retains the hook in angular position by penetrating into fold **4** while the foot also enables said hook to be locked in position by inserting a rivet **13** or like element behind said foot **12**. Said rivet or like element likewise permits the uniting of the sheet portions forming the fold.

Rods **2** can readily be obtained in very economical fashion by simple cutting, using wide tolerances by reason of the endwise play which is possible in the hole **8**. Similarly, the hooks can be fabricated with ease by a suitable moulding technique, using a plastic material that can be colored as required. Actual assembly is reduced to inserting the various components into one another and setting the rivets or eyelets. Colored or other markers can be associated with said hooks.

Variously colored plastic hooks are aesthetically more appealing and offer better stability on the rails, as well as being more convenient as regards sliding. Suspended files equipped therewith thus permit of easy manipulation.

It goes without saying that the devices for securing the hooks through the medium of their extensions to the folders could be differently designed.

As shown in FIG. 3, a hook **5***a* can be associated with a relatively long extension **11***a* having a right-angled foot **12***a* and comprising a set of holes **14** along its length. Said holes are designed to cooperate with a removable de-

vice such as a removable press-stud the heads of which can be rigidly connected to the sides of the sheet.

This solution also makes it possible to provide for a series of continuous files, using mutual connections whereby said files become integrally connected, each file having a single suspension rod mounted on one of the free edges of the file, the other edge consisting of a mere fold placed over the free edge and equipped with a suspension rod of the adjacent file. Said fold can be rigidly united with said adjacent file by the press-stud or studs cooperating with holes provided in the fold on either side of the crease along which the fold is made.

In this way the position of the hook can be adjusted with respect to the edge of the file by choosing that hole **14** which is best adapted to the occasionally variable spacing of rails **6** and **7**.

Reference is now made to the embodiment of FIG. 4, which differs from that of FIG. 3 in that the hook **5***b* is prolonged by a widened extension **11***b* of generally rectangular shape which projects beneath the shoulder **10***b* and embodies a single hole **14***b*. The passageway **8***b* can be formed during moulding of the hooks by means of recesses **8***c* opening alternately on the faces of the hook **5***b*.

Other adjustable or non-adjustable securing modes can be envisaged. For instance, the edge of the file could be devoid of a loop but comprise a plain fold, slits or other suspension means into which a rod would be slidable. Furthermore, the rod section could be other than round, with the hole **8** having a matching shape or not.

It goes without saying that many modifications can be made to the specific embodiments described without departing from the scope of the invention. By way of example, the right-angled foot **12***a* mentioned with reference to FIG. 3 could be dispensed with and the extension **11***a* could embody only one hole.

What I claim is:

1. A suspended file comprising a folded sheet having free upper edges at which the sheet is supported in suspended relation, said sheet having at one of said edges a portion thereof folded back onto itself to form a loop thereat, a rod mounted in said loop for rotation and free sliding movement with respect to the sheet, said rod having remote ends extending beyond the loop, a hook mounted on each of said ends of the rod outside said loop for sliding movement on the rod, said hooks being adapted for resting on a support, each hook including an extension projecting therefrom into the loop to thereby prevent relative turning of each hook and the sheet and means passing through the folded portions of the sheet at the loop and engaging said extensions for securing the extensions and the sheet together to prevent relative displacement therebetween in a direction longitudinally of the rod while maintaining the form of the loop.

2. In a suspended file according to claim **1**, wherein said hooks each have a shoulder from which protrudes said corresponding extension, said shoulders being applied adjacent a corresponding lateral edge of said sheet.

3. In a suspended file according to claim **2**, wherein each extension includes a terminal foot portion forming an angle with the remainder of said extension, said foot portion and extension being adjacent said sheet.

4. In a suspended file according to claim **1**, wherein said hooks are provided with holes above said extensions for receiving in free rotating and sliding fit said extremities of said rod.

5. In a suspended file according to claim **1**, wherein said rod is constituted of a segment of round wire which is mounted with endwise play in said hooks.

6. In a suspended file according to claim **1**, wherein said extensions include a multiplicity of fixing means one of which cooperates with said means for securing the extensions and sheets together whereby there is obtained adjustable spacing between said hooks.

7. In a suspended file according to claim **1**, wherein said means for securing the extensions and the sheet together is disengageable to allow detachment of the extensions and sheet.

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