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㉙ **Apparatus for locking paper binders.**

㉚ An apparatus for making it possible to lock paper binders (17), in particular ring binders or fork binders, so that unauthorized persons can not reach the contents of the binders, and comprising a bracket (1) having a front side (3), a split rear side (6-9) having means (10, 11) for lockingly connect said side parts (6-9) to each other, and further having side rails (4, 5), and which bracket is arranged to embrace the binder in the horizontal direction, and further comprising a locking bar (2) which is fixedly connected to the front side (3) and extends towards the rear side (6-9) substantially parallelly to the side rails (4, 5), which locking bar (2) is of such length as to extend to a distance at least slightly into the area behind and between two adjacent rings or forks of the binder, and which is formed with some type of hooking means (16) arranged to lockingly engage one of said rings or forks (18) of the binder if the locking apparatus is slid up or down in relation to the binder (17).

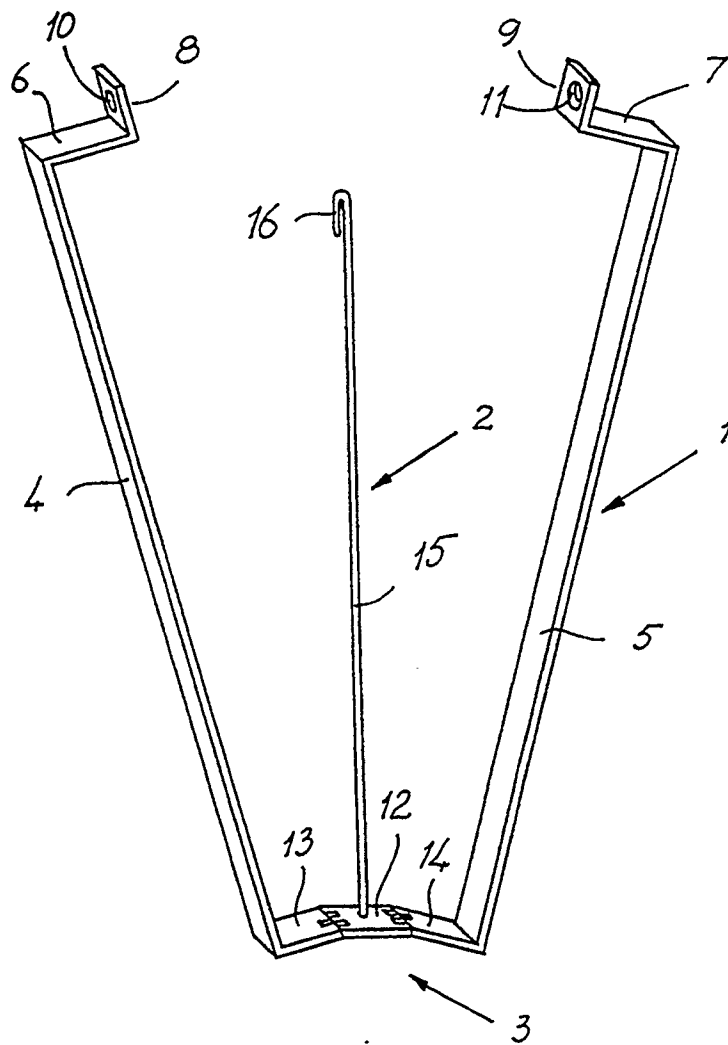


Fig. 1

The present invention relates to an apparatus for making it possible to lock paper or document binders, in particular ring binders or fork binders, so that unauthorized persons can not reach the contents of the binders.

By binder is meant, in this connection, any binder for papers or documents etc., which binder has a ring means or a fork means for holding the papers or documents etc. in the binder, in that the papers, to this end, are punched and are mounted with the punch holes on the rings or forks when the binder is in open condition, whereupon the binder is closed thereby keeping the papers etc. therein.

Normally binders have no locking means, and it is therefore easy for any person to open such a binder and to read the contents thereof. Binders containing secret material including quotations, price lists, contracts and other secret documents or papers, have so far normally been locked into cabinets, but generally only to a restricted extent, both for space reasons, and since it is considered a risk to put any and all secret documents in one place, and since there is always a risk that the attendant personnel forgets locking said cabinet.

In many cases it is desirable that the binders can be locked so that the contents thereof is available only for authorized persons.

The US patent 1,707,225 discloses an apparatus for locking a book and comprising an angularly bent anchoring strap which is in some way introduced in the book and is placed with the angle part thereof on the back side of the book between the actual back of the book and the rear edges of the leaves of the book, and which extends as far as to the front edges of the book covers and is locked in this position by means of one or two locking clamps which straddle over the front and back cover of the book, and whereby said anchoring strap projects through a slot of the locking clamp or clamps and is secured at the exterior thereof by means of a padlock.

The said known apparatus is disadvantageous in that it is only useful for books in which it is possible to introduce the angularly bent anchoring strap into a position between the back edges of the book leaves and the back of the book; in that said apparatus is only useful for books having stiff front and back covers; in that it does not guarantee that the entire apparatus including the anchoring strap is not by violence pulled out in the direction of the front of the book whereby the angle portion of the anchoring strap becomes straightened temporarily depending on its own spring action or is permanently bent to straight shape; or in that the locking means may be released in that the back of the book is cut or torn open; in that it is not suited for ring binders or fork binders; and in that it comprises, in addition to the padlock, at least two separate anchoring parts.

The object of the invention is to provide a binder

locking apparatus which overcomes the above mentioned disadvantages in the known apparatus and which is especially suited for ring binders or fork binders of any type and size, which is formed as an integral object, and which is formed so that it is impossible to unpermittedly or by violence release said locking apparatus from the binder in the direction forwardly or rearwardly, or by cutting or tearing the back of the binder open.

The apparatus according to the invention is formed so that the binders can be stored in locked condition in ordinary shelf systems, both individually and in groups of binders, in that said binders can be locked individually by means of padlocks, or several binders together by means of a common locking means.

This makes it impossible to open a binder without firstly removing the locking means, and it guarantees that the contents of the binder can not be reached and examined by any unauthorized person.

According to the invention the locking apparatus comprises a generally rectangular locking bracket having a shape and size substantially matching the horizontal width and depth of a binder, and which bracket is formed with a front part, two side rails and back part which is split into two pieces, each piece having a through bore for the connection of a padlock, and further comprising an intermediate locking bar which is integral with the front part and extends rearwardly substantially parallelly to the side rails, and which is of such length as to place the end thereof at least partly behind the binder rings or forks. Thereby the locking apparatus can not be slid up or down in relation to the binder from a central position thereof, since said intermediate locking bar thereby lockingly engages one of the rings or forks of the apparatus.

Further characteristics and advantages of the invention will be evident from the following detailed description of a couple of preferred embodiments of the invention.

In the drawings figure 1 is a perspective view of a first embodiment of the apparatus according to the invention. Figure 2 is a top view of the apparatus of figure 1 lockingly connected to an ordinary binder, and figure 3 is vertical cross section view, seen along lines III-III of figure 3. Figure 4 is a perspective view of a second embodiment of an apparatus according to the invention, and figure 5 is a top view of the apparatus of figure 4 connected to a binder.

The locking apparatus shown in figures 1-3 comprises a substantially rectangular bracket 1 having a shape and a size suited for snugly enclosing an ordinary binder in the horizontal direction. The bracket 1 is integral with a locking bar 2 extending inside the bracket 1, preferably parallelly therewith and adapted to engage the rings or the forks of a binder as shown in figures 2 and 3.

The bracket 1 is substantially rectangular and comprises a front side 3, two parallel side rails 4, 5

and a split rear side 6, 7 having angularly outwardly/rearwardly directed flanges 8, 9 each having a through bore 10 and 11 respectively.

In the illustrated case the front side 3 is formed in three pieces, namely a central side portion 12 and on each side thereof a front flap 13 and 14 respectively. The flaps 13 and 14 are hinge connected to the central front side portion 12, and they are integral with the side rails 4 and 5.

Alternatively, and as will be explained in connection to figures 4 and 5 the front side 3 may be formed as a single piece, only that both the front side 3 and the side rails 4 and 5 are at least slightly resilient, so that the bracket 1 can be opened as shown in figure 1 to embrace a binder.

In figures 1-3 the central front side piece 12 carries the locking bar 2, which in this case is formed as an elongated pin 15 having a hook 16 at the free end thereof. The locking pin 15 is of a length substantially matching the distance between the front edges of the binder covers and the rings or forks, and the hook 16 is, in the connection condition of the locking apparatus adapted to be located at least slightly behind the rings or forks, so that the pin hook 16 can be hooked on such a ring or fork, while having the front side pieces 13 and 14 of the apparatus engage the front ends of the binder covers, and having the rear side pieces 6 and 7 of the apparatus engage the back side of the cover.

The bracket 1 and the locking bar 2 can be made of steel or any other metal or of a suitable plastic material.

In figures 2 and 3 there is illustrated how a binder 17 is locked by means of the above described apparatus, and it is shown that the apparatus is locked in that the apparatus is positioned round the binder and is closed over the binder 17; that the locking pin 2 is hooked onto a fork 18 of the binder; that the front side 3 is in contact with the front edges of the binder covers 19 and 20; and that the flanges 8 and 9 are in contact with the back 21 of the binder and engage, or at least come close to, each other; and that a padlock (not shown) or a similar lock is being introduced in the bores 10 and 11.

Figures 4 and 5 illustrate an alternative embodiment of the locking apparatus according to the invention. This second embodiment is made as an integral piece of material of a suitable plastic material. Depending on the elastic properties of the material itself there is not need for making the side rails 4' and 5' hinge connected to the front side 3'. Also, in this alternative embodiment the locking bar 2', which is integral with the front side 3', is formed substantially T-shaped in the vertical direction with the T-arms 22 at the outer end of the bar. In this case the T-arms 22 are not arranged to be hooked onto a binder ring or a binder fork 18', but they are only introduced into the area between two adjacent rings or forks. The locking

apparatus, of course, can not be released in the front or back direction of the binder, but it can be slid a limited distance up and down on the binder, namely until a locking pin T-arm 22 engages one of the binder rings or forks 18' in a hooking function, thereby stopping any further sliding up or down of the locking apparatus.

Rather than using one padlock for each individual binder locking apparatus it is possible to lock several binders in common by introducing a bar through the bores 10 and 11 of said several binders and by locking said bar at the ends thereof, for instance by means of padlocks.

Reference Numerals

1	bracket
2	locking pin
3	front side (of 1)
4	side rail
5	side rail
6	rear side part
7	rear side part
8	flange (of 6)
9	flange (of 7)
10	bore (of 8)
11	bore (of 9)
12	central front side part
13	front flap
14	front flap
15	pin
16	hook (of 15)
17	binder
18	fork
19	binder cover
20	binder cover
21	binder back
22	T-end arm (of 2')

Claims

1. An apparatus for making it possible to lock paper

binders (17), in particular ring binders or fork binders, so that unauthorized persons can not reach and study the contents of the binders, **characterized** in that the locking apparatus comprises

a substantially rectangular lock bracket (1) having a front side (3), a rear side (6-9) and side rails (4, 5) and being arranged to embrace the binder in the horizontal direction and having a length and a width substantially matching the equivalent dimensions of the binder (17), so that the locking apparatus, in its closed condition, engages both the front edges of the binder covers (19), the back (20) and at least part of the side covers (19, 20) of the binder (17), and which bracket is split at the rear side (6-9) thereof corresponding to the back (21) of the binder and is formed with flanges (8, 9) having bores (10, 11) for introducing any type of locking means,

and a locking bar (2) which is fixedly connected to the front side (3) and extends towards the rear side (6-9) substantially parallelly to the side rails (4, 5),

and in that said locking bar is at least slightly longer than the binder distance from the vertical front edges of the binder covers (19, 20) to the rings or forks (18) thereof, and is formed with some type of hooking means (16; 22) arranged to be introduced between two of the rings or forks (18) of the binder (17) and to engage one of said rings or forks (18) to prevent a sliding up or down of the locking apparatus of the binder in relation to the binder (17).

2. Apparatus according to claim 1, **characterized** in that the hooking means of the locking bar (2) is an actual hook (16) adapted to be hooked onto any of the rings or forks (18) of the binder while closing the binder and thereafter closing and securing the locking apparatus by means of a pad lock or a similar locking means at the rear side of the apparatus.

3. Apparatus according to claim 1 or 2, **characterized** in that the front side (3) of the apparatus comprises a central front side portion (12) in which the locking bar (2) is mounted, and on each side thereof a front flap portion (13, 14) which are hingedly connected to said central front side portion (12) and which are integral with the adjacent side rail (4 and 5 resp.). (Figs 1-3)

4. Apparatus according to claim 1, **characterized** in that the locking bar (2') is substantially T-shaped in the vertical direction, and in that the T-ends (22) thereof form a hook means adapted to engage between two adjacent rings or forks of the binder and to come into locking engagement with one of

said rings or forks if the locking apparatus is slid up or down in relation to the binder. (Figs 4-5)

5. Apparatus according to claim 4, **characterized** in that the apparatus including the bracket (1') and the locking bar (2') is made as a single, integral piece of material, for instance of a suitable plastic material having a sufficient elasticity for being resiliently opened in connection to mounting the apparatus on a binder (17) and removing same therefrom.

6. Apparatus according to any of the preceding claims, **characterized** in that the rear end of the bracket is split (6, 7) for making it possible to widen the side rails (4, 5) in connection to mounting of the apparatus on a binder (17) and removing same therefrom resp., and in that the said split rear side parts (6, 7) are formed with angularly bent flanges (8, 9) having bores (10, 11) for introducing a padlock, a locking bar or a similar locking means.

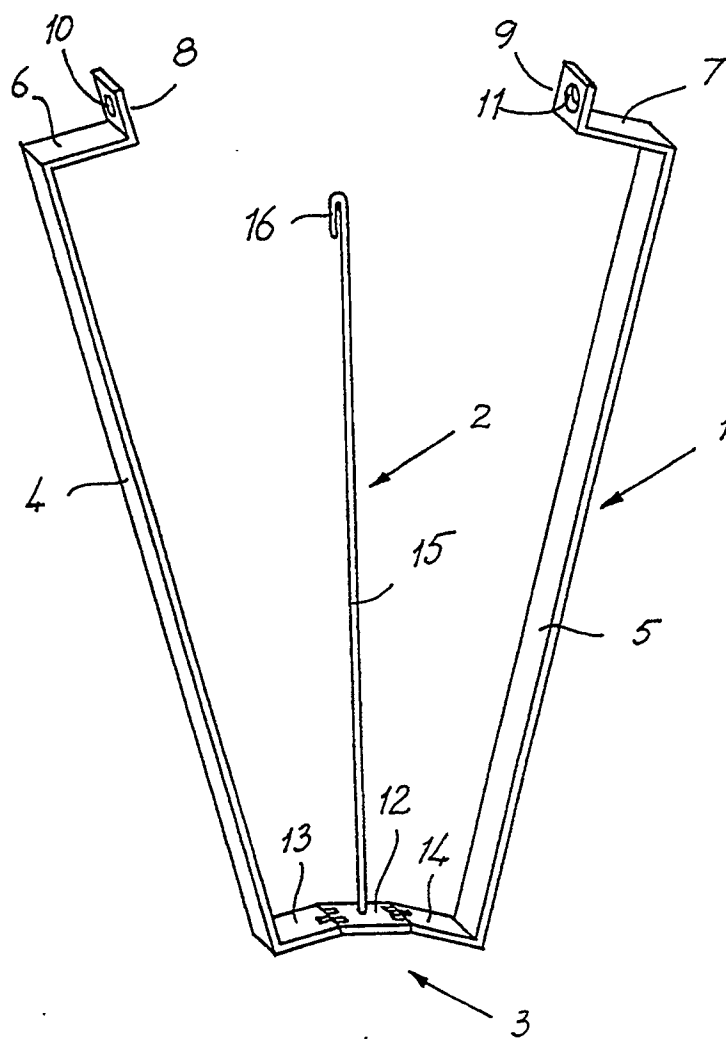
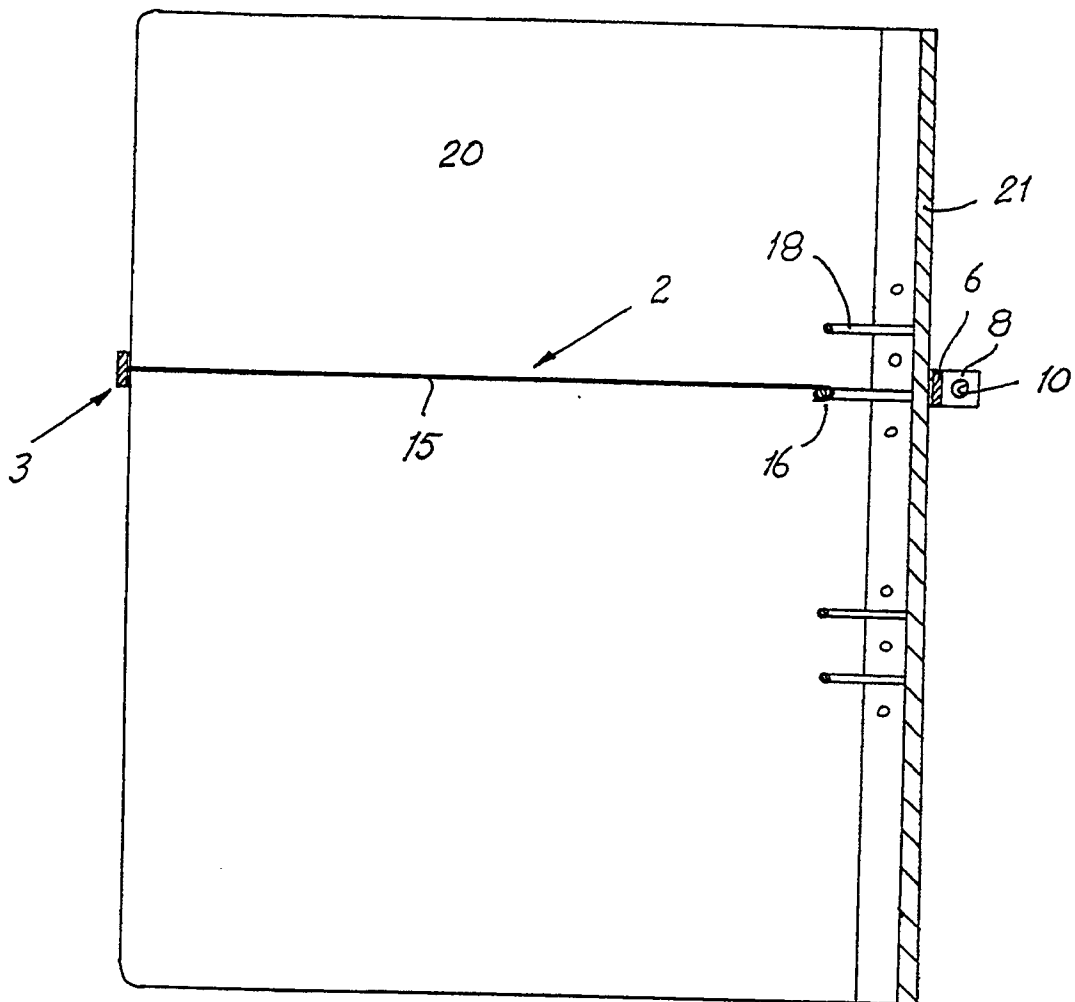
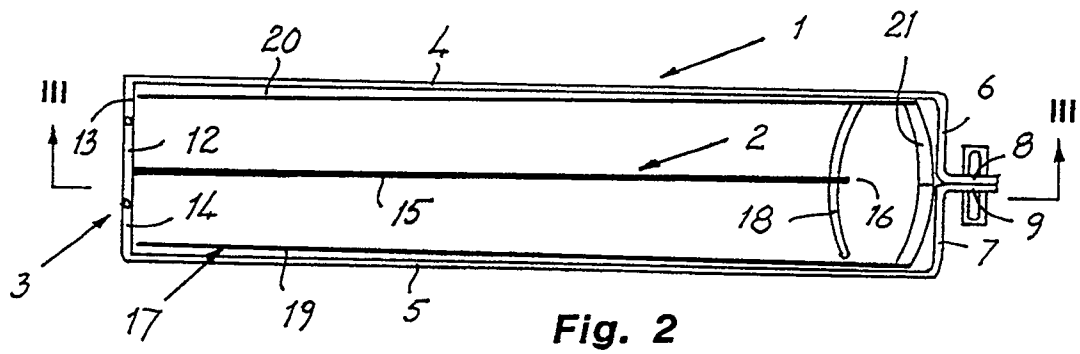
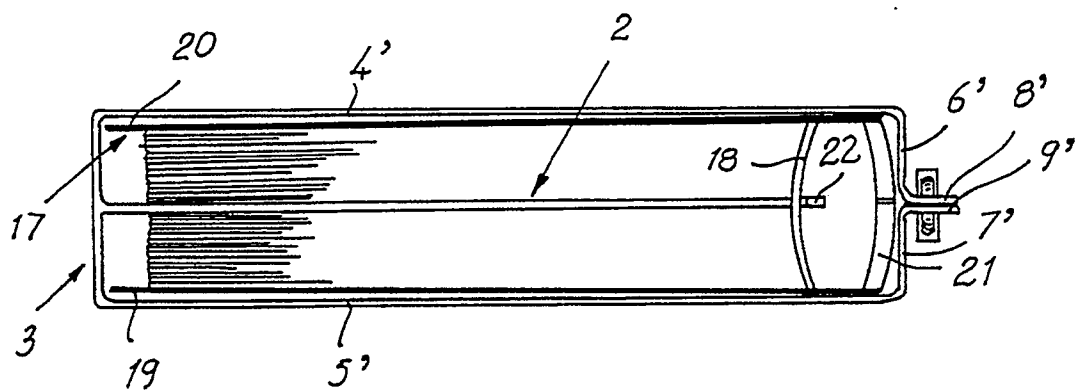
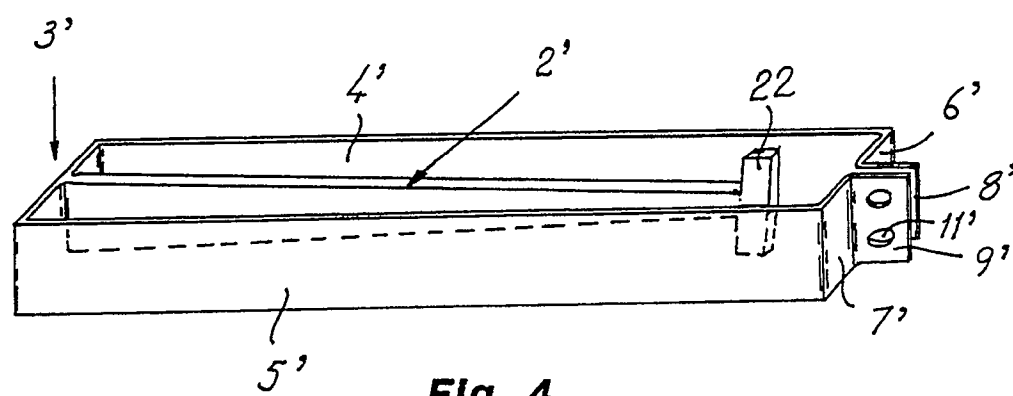


Fig. 1







European Patent
Office

EUROPEAN SEARCH REPORT

Application Number

EP 91 85 0084

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
D,A	US-A-1 707 225 (M.H.JACKSON) * the whole document *	1	B42F13/00
A	US-A-1 923 081 (A. ELSNER) * the whole document *	1	
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			B42F B42D
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 12 JULY 1991	Examiner J-P MEULEMANS
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application I : document cited for other reasons & : member of the same patent family, corresponding document			

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