July 27, 1943. A. N. HANNA 2,325,317

FILING DEVICE

Filed Sept. 9, 1941

Fig. 1.

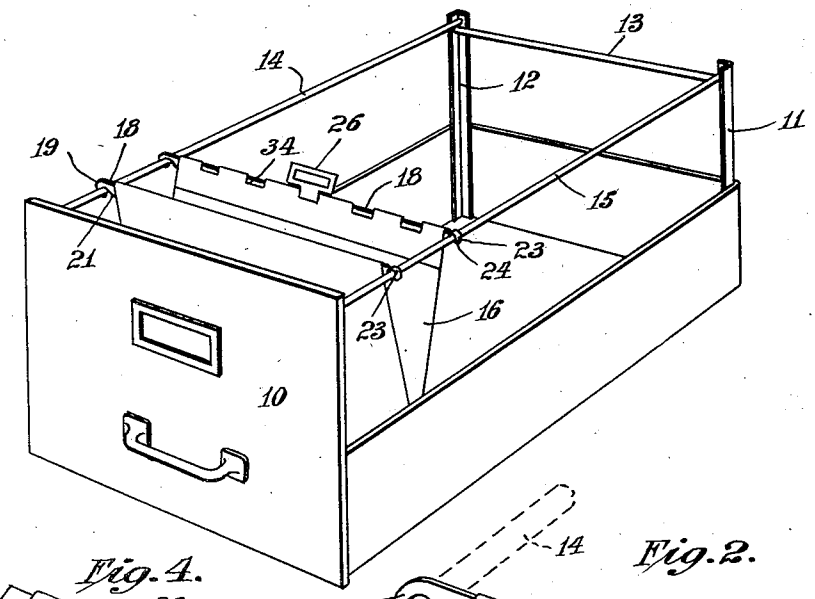


Fig. 4.

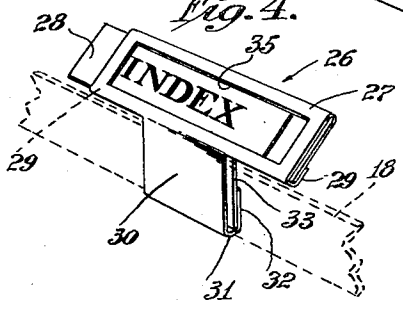


Fig. 2.

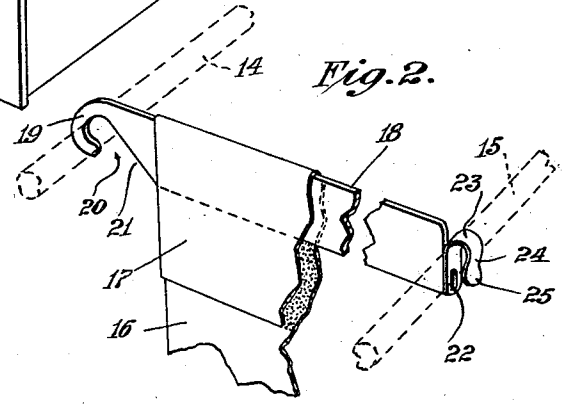
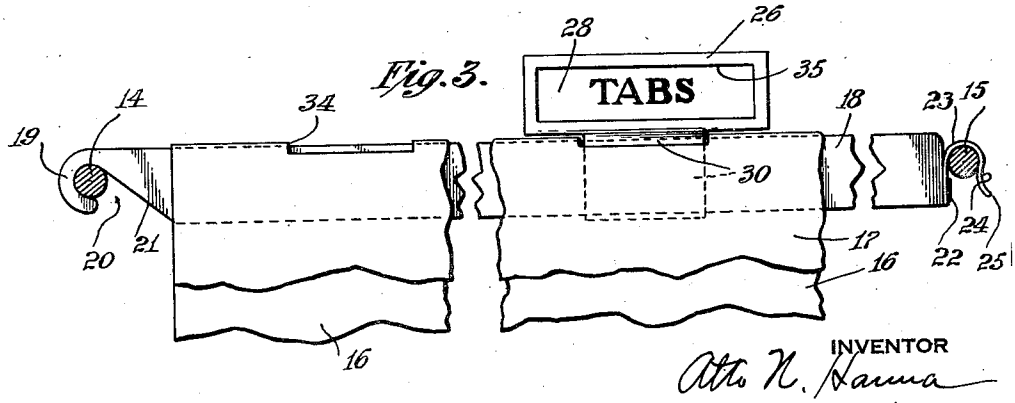


Fig. 3.



INVENTOR

Atto N. Hanna

BY

Grant J. Wentworth

ATTORNEY.

Patented July 27, 1943 2,325,317

UNITED STATES PATENT OFFICE

2,325,317

FILING DEVICE

Atto N. Hanna, Orange, N. J.

Application September 9, 1941, Serial No. 410,133

6 Claims. (Cl. 129—16.7)

The invention relates to filing devices, and more particularly to a device of this kind employing file folders adapted to be slidably and removably mounted in relation to rods carried by a filing cabinet of the box or sliding drawer type.

In Letters Patent No. 2,257,052 granted to me under date of Sept. 23, 1941, there is shown and described a filing device of the type to which my invention relates. In the device of said patent, one end of the suspension strip has a bayonet slot, and the other end of said strip is provided with a vertical slot adapted to be closed by a pivotal member having an angular extension adapted to close the vertical slot so as to prevent tilting of the file folder and its accidental displacement from the supporting rods upon opposite sides of the cabinet, while permitting a free sliding movement of the folders along these rods.

With this construction, it is necessary to manually actuate the pivotal member when inserting a folder in, and removing it from, a cabinet, so that carelessness in the handling of the folders may result in an improper locking of the suspension means in its position within the cabinet. Furthermore, in the device of my said Letters Patent, no provision is made for attaching tabs to a file folder.

To correct the above conditions, I have provided a filing device of the character above referred to, wherein the pivotal locking member is dispensed with. In my present device, the locking of the suspension strip in the cabinet is secured by so constructing said strip that when it is placed upon the supporting rods by a rotative movement, said strip and the folder carried thereby will receive movement longitudinally of the strip to an extent to bring the closed portion of the slot at one end of the strip into engagement with the supporting rod, and to cause the opposite end of said suspension strip to be automatically engaged with the opposite supporting rod in a manner not only requiring no attention from the user of the file, but to prevent any accidental lifting or tilting of the file.

This result is secured by means of a spring metal clip secured to one end of the suspension strip, this clip being so shaped that the upper portion thereof conforms to the shape of the supporting rod. The clip is constricted and provided with an outward flare adjacent the lower end of the free leg thereof so that this leg may flex when placing a folder within a cabinet and, by a reflex action, close the clip to prevent accidental upward movement of the strip unless sufficient force be applied thereto to cause the flexing of the clip.

With such a construction, the securing of the suspension strip in position requires no attention from the operator except slight downward pressure of the end of the strip to which the clip is attached, when placing a folder in a cabinet, or a flexing of the free leg of the clip either by means of the flared end of the clip leg or an upward pull on the end of the strip adjacent the clip. While the dimensions of the clip are such as to permit free sliding movement of the strip as a whole along the supporting rods, the clip may be made of material sufficiently wide in comparison with the thickness of the suspension strip to reduce to a minimum likelihood of even slight tilting of the folder at either end of the suspension strip.

Prior to my present invention, index tabs have either been permanently or removably secured to the heavy paper of the folder, and mutilation or displacement of such tabs was annoyingly frequent.

In the herein described filing device, I obviate this difficulty by supporting the index tabs in a metal holder carried by the suspension strip itself. This holder, and the folder itself, are so formed that they may be variably positioned along the length of one suspension strip so as not to interfere with the tabs upon adjacent folders.

The manner of mounting the index holder is such that its position along the top of the paper folder may be quickly determined or altered by the user of the file cabinet and, if desired, the tab itself may be removed and be replaced by another tab without disturbing the operative relation of the tab holder and the other parts of the folder.

The invention consists primarily in a filing device embodying therein a folder, each top edge of which is provided with metal suspension means projecting beyond the side edges of the folder, said means, at one side of the folder, having a hooked end and a downwardly opening slot, and at the other side of the folder having a downwardly opening spring clip one leg of which is secured to said strip, and the other or free leg is so formed as to cause said clip to be constricted adjacent the bottom thereof, whereby when placing the folder in, or removing it from, a cabinet, flexing of the free leg of said clip permits engagement or disengagement of said suspension means with a supporting rod, and reflexing of said clip will engage the end portion of the free leg

of said clip with the under portion of said supporting rod and prevent accidental upward movement of the folder; and in such other novel features of construction and combination of parts as are hereinafter set forth and described, and more particularly pointed out in the claims hereto appended.

Referring to the drawing,

Fig. 1 is a perspective view of a cabinet having a filing device embodying the invention mounted therein;

Fig. 2 is a perspective condensed view of a portion of one side of a folder and its suspension strip with the supporting rods shown in dotted lines;

Fig. 3 is a fragmentary condensed elevation of the upper portion of one side of a folder and the suspension means therefor, with a tab holder applied thereto, and

Fig. 4 is a perspective view of a tab holder detached from the folder.

Like numerals refer to like parts throughout the several views.

In the accompanying drawing, the drawer of a filing cabinet is shown at **10**. In the rear corners of this drawer are angle iron uprights **11** and **12** connected by a cross stay **13**. Extending from these uprights to the front panel of the drawer are horizontal supporting rods **14** and **15**. These rods are preferably ordinary round rods and may be secured in relation to the drawer structure, including the uprights, in any desired manner.

The construction of this filing drawer is immaterial to the invention, which relates more particularly to the filing devices to be mounted therein.

These filing devices include a heavy paper folder **16** of the usual construction, the top edge of each side of which is folded, as shown at **17**, to provide a hem through which a suspension strip **18** may be passed.

This suspension means includes a flat metal strip of greater length than the width of the folder. This strip has a hooked end **19** adapted to embrace one of the supporting rods as **14**, the strip having a downwardly opening slot **20** for facilitating the mounting of the strip upon the supporting rod and permit longitudinal movement of the strip when placing a folder within or removing it from the file cabinet. The wall **21** of the slot is inclined as shown to facilitate the operation of placing or removing the device.

The strip **18** ordinarily is formed of sheet metal, and the end thereof opposite the hooked end is provided with a projecting tongue **22** by means of which a spring clip **23** may be secured to this end of the strip by a rivetting or upsetting operation upon said tongue, about an opening in said clip.

The upper end of the clip **23** is rounded to conform to the contour of the supporting rod **15**, the free leg of this clip being constricted, as shown at **24**, so that a sufficient portion of the clip will embrace said rod in a manner to prevent any lifting action of this end of the suspension strip except as a result of the flexing of the free leg of the clip.

Below the constricted portion **24**, the free leg of the strip is flared outwardly, as shown at **25**, this outwardly flared portion having two functions, to wit: developing a camming action to cause flexure of the free leg of the clip when mounting a folder within the cabinet, and provide a finger hold for flexing this leg of the clip when removing a folder from the cabinet.

In filing devices of the general character to which the invention relates, it is a common practice to segregate papers relating to particular subjects from those relating to other subjects by using a separate folder for each subject.

Prior to my invention, index tabs have been associated with the folders in various ways. In some instances, tabs have been permanently cemented to the material of the folder, while in other instances, the material of the folder has been provided with vertical slots and flexible tabs having side tongues adapted to end said slots have been used. Such means of securing tabs to the folders have not proved satisfactory, owing to the liability of the tabs or material of the folder being torn or displaced in the handling of the folders.

To obviate the above difficulties, I provide metal tab holders supported directly from the suspension strip itself, so that there is no possibility of the mutilation of the tabs or their separation from the folder, or the tearing of the folder itself, although such is not likely because of the heavy weight and toughness of the paper used in such folders.

The metal holder shown at **26** is formed of thin gauge sheet metal, folded at **27** to form a pocket for a paper or thin cardboard slip **28**. Tongues **29**, integral with the material from which the folder is made, are folded toward the ends of this pocket,so as to close the bottom thereof.

The pocket is provided with an integral stem **30** folded at **31** to form a channel for the passage of the suspension strip **18**, the free edge **32** of the metal forming one side of this stem being bent about the free edge **33** of the metal forming the other side of the stem so as to prevent such spreading action as will permit the stem to pass the strip **18**.

In order to support these tab holders from the suspension strip, it is necessary to provide cut-out portions **34** at the top of the fold **17** for the passage of the stem **30** of the holder. Since, as a matter of convenience, it is desirable to differently locate tabs upon different folders, I provide a plurality of such openings **34** at spaced intervals, as shown particularly in Fig. 1 of the drawing. The use of a plurality of such openings is merely to permit standardized manufacture of the folders so as to meet all conditions arising during their use.

One wall of the pocket for the reception of the slip **28** is provided with a sight opening **35**, and this pocket may extend in the plane of the side of the folder or be rearwardly tilted in order to increase its visibility.

The operation of a filing device embodying the invention is substantially as follows:

When assembling a filing device embodying the invention, the stem **30** of a tab holder is passed through a selected opening **34** and a suspension strip is passed through the hem formed by the fold **17** and through the opening in this stem. In this manner, no portion of the tab holder, excepting that projecting beyond the top of the folder, is so exposed as to interfere with adjacent filing devices. In fact, the stem **30** is enclosed in its entirety within the folded portion **17** forming the hem of the folder proper.

It will be noted that in handling the folder, no tearing strains are applied to the tab holder or to the folder itself by said holder.

When mounting a device embodying the invention in a cabinet, the slot **20** of each suspension strip, adjacent the hooked end, is located above the supporting rod **14** and the folder is lowered,

the inclined surface 21 tending to impart longitudinal movement to said strip so as to engage the hooked end 19 with said rod 14 so as to embrace same to an extent to prevent lateral or vertical play of the strip 18. The other end of the strip 18 is then lowered toward the opposite supporting rod 15 until the clip 23 engages the upper portion of said rod.

Since the constricted portion 24 affords a gap less than the diameter of the rod 15, it is necessary to flex the free leg of the clip before it can be properly engaged with said rod. The co-action of the curved surface of the rod and the flared leg of the clip 23 will flex this leg to an extent to permit the clip to pass the supporting rod and permit a reflex action so as to embrace this rod to an extent sufficient to prevent any lifting of this end of the suspension strip except as a result of flexing of the free leg of the clip.

It will be necessary to exert some downward pressure to cause the flexing of the free leg of the clip when placing a folder within the cabinet, but there is no necessity for the operation of any movable locking part to properly engage and hold the suspension strips in relation to the supporting rods.

The flared end 25 of the end clip 23 will assist in causing the desired flexure of the leg of the clip carrying same, and may be also used, if desired, to flex this leg when removing a folder from the file cabinet so as to minimize the amount of pull required to disengage the clip from its co-operating supporting rod. The use of this finger grip is not necessary since the free leg of the clip may be flexed by merely an upward pull upon the end of the suspension strip.

In mounting and removing a filing device from its supporting rods, rotation of the hooked end about its supporting rod 14, and longitudinal movement of the suspension strips is necessary.

The use of a spring clip as described minimizes side play of the filing device in relation to the supporting rods, and yet the suspension strips may slide freely along such rods to provide clearance for the removal of a filing device.

The sheet metal from which the suspension strips are made is of fairly thin gauge, between one-sixteenth and one-thirty-second of an inch, but the spring clip may be made of considerably heavier stock and of spring metal, and be of a width to check any tendency toward tilting of a suspension strip, particularly in the absence of any substantial play between the walls of said clip and the surface of the co-operating supporting rod.

While each suspension means is made of two parts, these parts are permanently and rigidly connected, so that a single unitary structure results.

As compared with the filing device described in my patent, the production of a device embodying my present invention employs suspension means requiring less material and fewer operations.

It is not my intention to limit the invention to the precise details of construction shown in the accompanying drawing, it being obvious that such may be varied without departing from the spirit and scope of the invention.

Having described the invention, what I claim as new and desire to have protected by Letters Patent is:

1. A filing device embodying therein a folder, each top edge of which is provided with metal suspension means projecting beyond the side edges of the folder, said means, at one side of the folder, having a hooked end and a downwardly opening slot, and at the other side of the folder having a downwardly opening spring clip one leg of which is secured to said strip and the other or free leg is so formed as to cause said clip to be constricted adjacent the bottom thereof, whereby when placing the folder in, or removing it from, a cabinet, flexing of the free leg of said clip permits engagement or disengagement of said suspension means with a supporting rod, and reflexing of said clip will engage the end portion of the free leg of said clip with the under portion of said supporting rod and prevent accidental upward movement of the folder.

2. A filing device embodying therein a folder, each top edge of which is provided with suspension means comprising a sheet metal strip projecting beyond the side edges of the folder, said strip, at one side of the folder, having a hooked end and a downwardly opening slot, and at the other side of the folder having a downwardly opening spring clip one leg of which is secured to said strip by means of a tongue projecting from the end of said strip and upset about an opening in said clip, the free leg of said clip being so formed as to cause said clip to be constricted adjacent the bottom thereof, whereby when placing the folder in, or removing it from, a cabinet, flexing of said clip permits engagement or disengagement of said suspension means with a supporting rod, and reflexing of said clip will engage the end portion of the free leg of said clip with the under portion of said supporting rod and prevent accidental upward movement of the folder.

3. A filing device embodying therein a folder, each top edge of which is provided with suspension means comprising a sheet metal strip projecting beyond the side edges of the folder, said strip, at one side of the folder, having a hooked end and a downwardly opening slot, and at the other side of the folder having a downwardly opening spring clip of a width greater than the thickness of the metal of said strip one leg of which is secured to said strip by means of a tongue projecting from the end of said strip and upset about an opening in said clip, the free leg of said clip being so formed as to cause said clip to be constricted adjacent the bottom thereof, whereby when placing the folder in, or removing it from, a cabinet, flexing of said clip permits engagement or disengagement of said suspension means with a supporting rod, and reflexing of said clip will engage the end portion of the free leg of said clip with the under portion of said supporting rod and prevent accidental upward movement of the folder.

4. A filing device embodying therein a folder, each top edge of which is provided with metal suspension means projecting beyond the side edges of the folder, said means, at one side of the folder, having a hooked end and a downwardly opening inclined slot whereby a camming surface is provided to impart longitudinal movement to said suspension means, and at the other side of the folder having a downwardly opening spring clip one leg of which is secured to said strip, and the other or free leg is so formed as to cause said clip to be constricted adjacent the bottom thereof, whereby when placing the folder in, or removing it from, a cabinet, flexing of the free leg of said clip permits engagement or disengagement of said suspension means with a supporting rod, and reflexing of said clip will engage the end portion of said clip with the un-

der portion of said supporting rod and prevent accidental upward movement of the folder.

5. A filing device embodying therein a folder, each top edge of which is provided with suspension means comprising a sheet metal strip projecting beyond the side edges of the folder, said strip, at one side of the folder, having a hooked end and a downwardly opening inclined slot whereby a camming surface is provided to impart longitudinal movement to said strip, and at the other side of the folder having a downwardly opening spring clip one leg of which is secured to said strip by means of a tongue projecting from the end of said strip and upset about an opening in said clip, the free leg of said clip being so formed as to cause said clip to be constricted adjacent the bottom thereof, whereby when placing the folder in, or removing it from, a cabinet, flexing of said clip permits engagement or disengagement of said suspension means with a supporting rod, and reflexing of said clip will engage the end portion of the free leg of said clip with the under portion of said supporting rod and prevent accidental upward movement of the folder.

6. A filing device embodying therein a folder, each top edge of which is provided with suspension means comprising a sheet metal strip projecting beyond the side edges of the folder, said strip, at one side of the folder, having a hooked end and a downwardly opening inclined slot whereby a camming surface is provided to impart longitudinal movement to said strip, and at the other side of the folder having a downwardly opening spring clip of a width greater than the thickness of the metal of said strip one leg of which is secured to said strip by means of a tongue projecting from the end of said strip and upset about an opening in said clip, the free leg of said clip being so formed as to cause said clip to be constricted adjacent the bottom thereof, whereby when placing the folder in, or removing it from, a cabinet, flexing of said clip permits engagement or disengagement of said suspension means with a supporting rod, and reflexing of said clip will engage the end portion of the free leg of said clip with the under portion of said supporting rod and prevent accidental upward movement of the folder.

ATTO N. HANNA.