

April 27, 1965

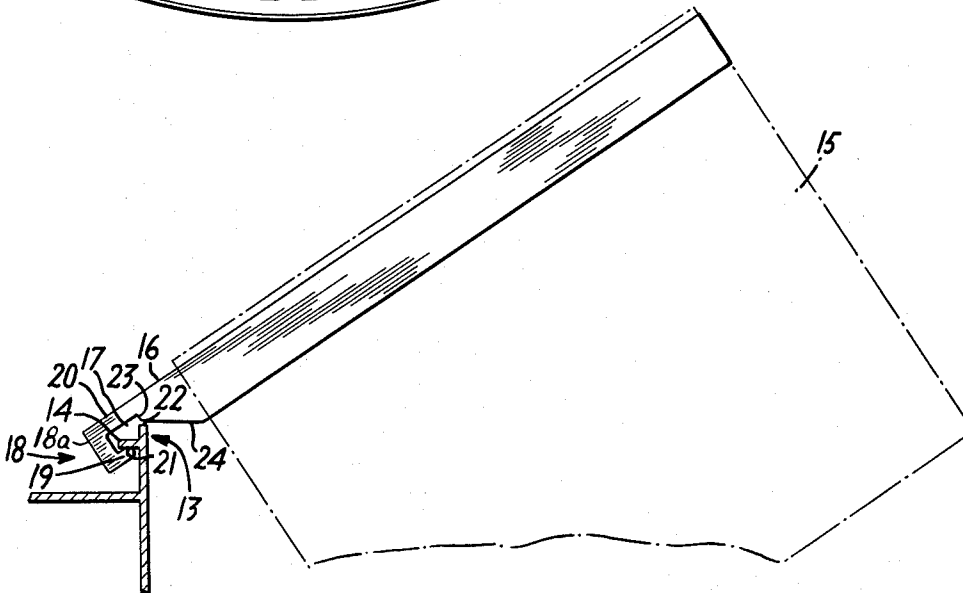
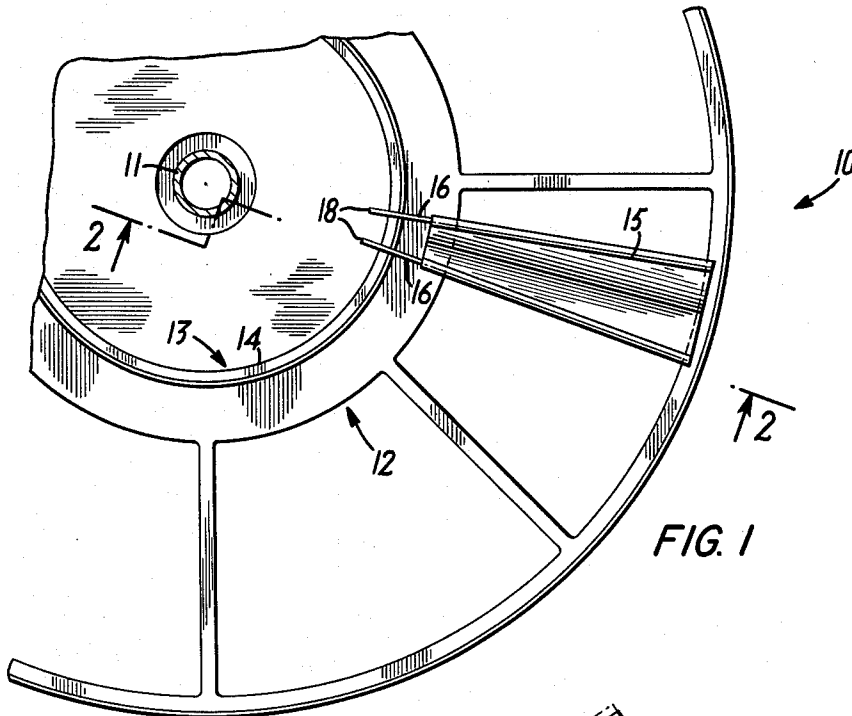
G. W. WASSELL

3,180,339

FILE HANGER

Filed Oct. 12, 1962

2 Sheets-Sheet 1



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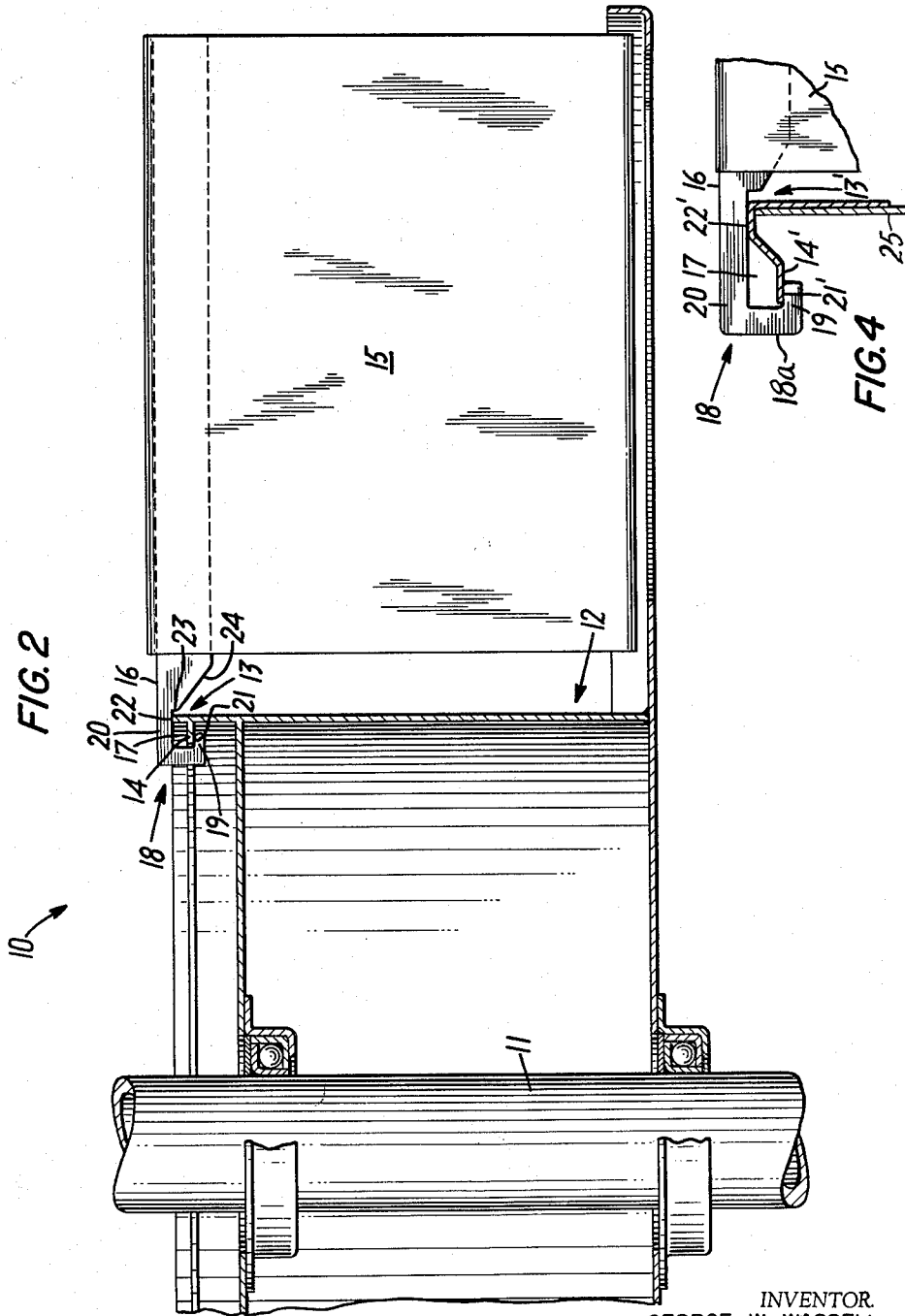
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FILE HANGER

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2 Claims. (Cl. 129—16)

This invention relates to cantilever file hangers and, in particular, to such a hanger that is stable and yet readily insertable and removable from files.

Various cantilever hangers have been used to support file material; see for example U.S. Patent No. 2,826,203 which discloses cantilever hangers found useful by the assignee of this application. Those hangers constituted a significant improvement but were not as simple and inexpensive as desired, nor could they be inserted and removed from their supporting structure easily enough.

The present invention is an improvement over the cantilever hangers of the above patent and provides a stable and slidable cantilever extending from a simple support rail. The support rail, from which the cantilever may readily be removed, includes an inwardly extending flange that engages at an inner pivot or lower supporting surface a short hook arm on the end of the cantilever. A long hook arm on the same cantilever end engages the rail at an outer pivot or upper supporting surface positioned above the inner pivot to lend stable support to the hanger. A shoulder outwardly of the upper pivot retains the cantilever on the rail and permits its disengagement only when the hanger is rotated upwardly and then displaced inwardly.

A further feature of the invention resides in the provision of a diagonal edge leading downwardly and outwardly from the shoulder to aid in guiding the hanger into position on the support rail.

These and further advantages of the invention will be more readily understood when the following description is read in conjunction with the accompanying drawings, in which:

FIGURE 1 is a plan view of a portion of a rotary file incorporating a cantilever hanger embodying the principles of the present invention;

FIGURE 2 is a longitudinal section taken along the view line 2—2 of FIGURE 1 looking in the direction of the arrows and showing the cantilever on its support rail;

FIGURE 3 is a fragmentary view similar to a portion of FIGURE 2 but showing the cantilever hanger rotated upwardly prior to its removal from the file; and

FIGURE 4 is a cross section of a modified rail supporting a cantilever in accordance with the invention.

Referring to an illustrative embodiment of the invention in greater detail with reference to the drawings, a rotary file 10 is comprised of a vertical axle 11 journaling a horizontal rotary tier 12. A circular support rail 13 on the tier incorporates an inwardly extending flange 14. While the rail 13 has been shown integral with the tier 12, it is often desirable to extrude a separate rail and attach it to the tier by suitable fasteners.

A file folder 15 in the tier 12 is carried by a cantilever hanger 16 that extends outwardly from the rail 13. A recess 17 punched or otherwise formed in the inner end of the cantilever 16 provides a generally J-shaped hook 18 comprised of a lower short arm 19 having a free end and an upper long arm 20 extending from an end portion 18a. The upper edge of the short arm 19 bears against the underside of the flange 14 at an inner pivot or lower supporting surface 21 while the lower edge of the long arm 20 is supported by the rail 13 at an outer pivot or upper supporting surface 22. The elevation of

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the outer pivot 22 must be higher than that of the inner pivot 21 to prevent rotation of the cantilever about its longitudinal axis and thereby provide stable support for the hanger. Moreover, the distance between the lower surface supporting the short arm 19 and a horizontal plane touching the upper surface supporting the long arm is greater than the thickness of the flange 14 to enable the pivoting movement of the cantilever on the inner and outer pivots.

To hold the cantilever hanger 16 securely in position on the rail 13, a shoulder 23 extends downwardly from the long arm 20 to a diagonal edge 24 leading to the lower edge of the cantilever. The shoulder 23 is spaced from the outer edge of the short arm 19 less than the distance from the outward surface of the rail 12 to the inward edge of the lateral flange 14 to prevent accidental disengagement of the hanger from the rail.

In use, the cantilever hanger 16 is positioned on the rail 13 by placing the diagonal edge 24 against the rail 13 with the hanger rotated to approximately the position shown in FIGURE 3. The hanger may then be pulled outwardly and the edge 24 will guide the short arm 19 into hooking engagement with the flange 14. After being rotated to its horizontal position, the hanger 16 may be slipped along the rail 13 as desired to support filed material.

When it becomes necessary to remove the cantilever hanger 16 from the tier 12, it is rotated upwardly, as shown in FIGURE 3, to carry the shoulder 23 beyond the upper edge of the rail 13. The hanger 16 may then be pushed inwardly and removed from the rail.

If it is desirable to have the cantilever narrower at its supported end, the diagonal edge 24 may be omitted. However, with a wide hanger such as shown in the drawings, there must be a diagonal edge, or a portion of the hanger must be cut away outwardly of the shoulder 23, to avoid the need for rotating the hanger 16 through an excessive angle before the lower edge of the shoulder clears the rail 13.

In some files it is preferable to use a rail, such as shown in FIGURE 4, that may be stamped from steel, for example. Parts in FIGURE 4 common to those in FIGURES 1 to 3 are designated by like reference numerals and parts similar to those in FIGURES 1 to 3 are designated by primed reference numerals. The rail 13' may be a portion of the rotary tier 12 or it may be attached as shown to a wall 25. Note that the outer pivot or upper supporting surface 22' provides a broad support area for the cantilever 16 and is particularly suitable, therefore, for supporting heavy loads without being deformed by the arm 20.

It is apparent that the inventive cantilever hanger structure provides a cantilever that is readily inserted and removed from its support rail and yet affords a strong and stable supporting hanger that will not have a tendency to rotate about its longitudinal axis. It will be understood that the above-described embodiments of the invention are illustrative only and modifications thereof will occur to those skilled in the art. Therefore the invention is not to be limited to the specific embodiments disclosed herein, but is to be defined by the appended claims.

What is claimed is:

1. Cantilever hanger structure for supporting file material comprising a rail, a cantilever formed with a section to support file material, the cantilever being supported at one end by the rail and extending outwardly therefrom in one direction, the rail including a flange extending inwardly therefrom in a direction opposite to the cantilever, a lower supporting surface on the underside of the flange and an upper surface on the upper side of the flange, an upper supporting surface on the upper side of the rail

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outwardly of the lower supporting surface and the upper side surface of the flange, the lower supporting surface being spaced from and located below a horizontal plane touching the upper supporting surface, the distance between the lower supporting surface and the horizontal plane thereby being greater than the thickness of the flange to enable the cantilever to be partially rotated about the rail and removed therefrom, said supported end of the cantilever comprising a generally J-shaped hook including an end portion from which extends outwardly a lower short arm having a free end, the short arm hooking under the flange and having its upper inner edge in contact with the lower supporting surface on the underside of the flange at an inner pivot, the hook also including an upper long arm extending outwardly from the end portion of the hook to the section of the cantilever that supports file material, the upper long arm having its lower inner edge engaging the upper supporting surface on the rail at an outer pivot, the upper inner edge of the short arm and the lower inner edge of the long arm lying in horizontal planes spaced apart the same vertical distance as the lower supporting surface on the flange is spaced from the horizontal plane touching the upper supporting surface of the rail, and a shoulder on the cantilever extending downwardly from the long arm and engageable by the outward side of the rail,

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the shoulder being spaced from the free end of the short hook arm less than the distance from the inner edge of the flange to the outward side of the rail to prevent accidental disengagement of the cantilever from the rail, whereby the cantilever is securely and stably supported by the rail and may be readily removed therefrom by pivoting it upwardly about the rail until the shoulder is above the rail and then displacing it inwardly to unhook the short arm from the flange.

2. A cantilever hanger as defined in claim 1, in which a diagonal edge extends downwardly and outwardly from the shoulder to aid in guiding the hanger into position on the support rail.

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JEROME SCHNALL, *Primary Examiner.*