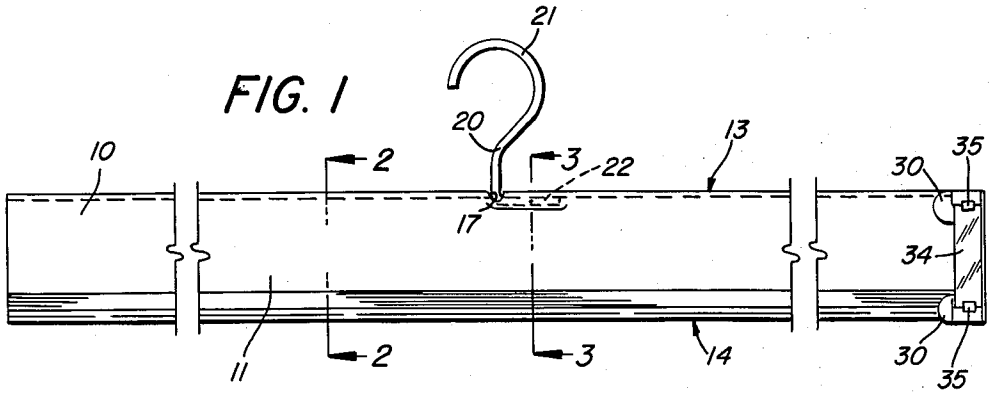
Dec. 13, 1960 K. C. WALLACE 2,964,197

FILING HANGER

Filed Nov. 24, 1958

FIG. 1



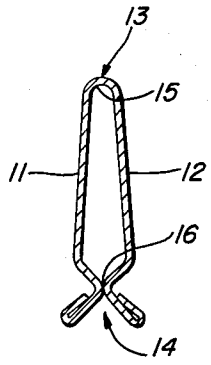


FIG. 2

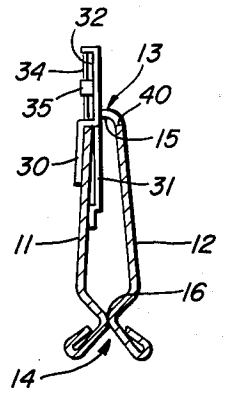


FIG. 2A

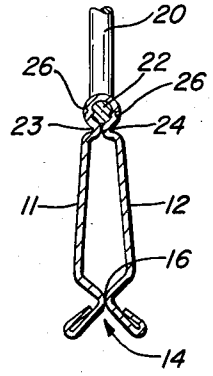


FIG. 3

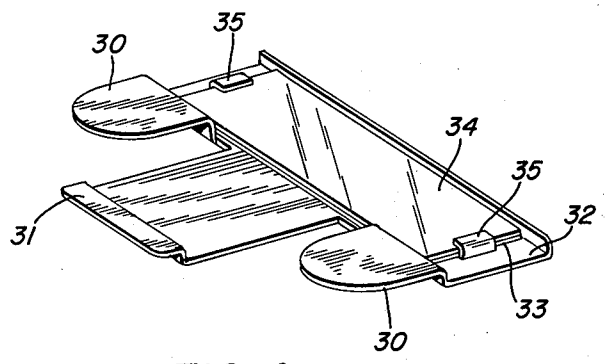


FIG. 4

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FILING HANGER

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3 Claims. (Cl. 211—45)

This invention relates to a filing device and more particularly to a hanger made of thin gauge sheet metal for suspending and filing offset plates, negatives, engineering drawings and blueprints, X-ray films, maps, artwork, rugs and fabric swatches, and other similar items.

An object of the invention is to provide a filing device of reasonably low cost which may be used practically for the above purposes.

A particular object of the invention is to provide a filing device of thin gauge sheet metal stock which is adapted to springingly and clampingly engage the sheets or plates to be filed but which may be made of relatively inexpensive metal of low resiliency and yield strength in bending.

The invention contemplates the use of a channel of such sheet metal which will function as a clamping device, such channel being suspended by a hanger wire or the like. A problem in working with such material is to accomplish at low cost a fastening of the hanger wire to the channel without derogating significantly from the effectiveness of the clamping action of the channel. Attempts to accomplish such a fastening by crimping without any weldment or additional fastening means presents a problem because the nature of the material is such that crimping the channel to effect the fastening of the hanger wire deforms the hanger and derogates from the effectiveness of the clamping action and particularly from uniformity thereof along the length of the channel.

A particular object of the present invention is to accomplish fastening between the hanger wire and the channel without significantly derogating from the effectiveness of the clamping action along the length of the channel.

Another object of the invention is to provide a hanger having the above-mentioned characteristics and economy of manufacture and which is also convenient to use.

The invention involves the concept of providing a channel having two sides joined around a top bend in which is received in nested relationship a longitudinally extending portion of a hanger wire, crimps being provided in the sides of the channel which extend toward each other immediately below and parallel to such longitudinally extending portion of the hanger wire, whereby the hanger wire is caught in such nested relationship within the top bend of the channel.

The invention will become more apparent from the following description of one concrete example.

In the drawings:

Figure 1 is a side elevation of a filing device embodying the invention.

Figure 2 is a cross-section on an enlarged scale taken on the plane of line 2—2 in Figure 1.

Figure 2A is a view similar to Figure 2 showing a slight modification of the structure.

Figure 3 is a cross-section taken on the plane of line 3—3 in Figure 1.

Figure 4 is an isometric detail view of a tab which may be employed with the invention.

Shown in the drawings is a longitudinally extending channel 10 having two opposite sides 11 and 12 and having a top edge generally indicated by the reference numeral 13, and a bottom edge generally indicated by the reference numeral 14. The channel sides 11 and 12 are integrally joined around a top bend 15 which extends longitudinally along the top edge 13 of the channel 10. As shown in the drawings, the sides are spaced from each other below such top bend except along a longitudinally extending line of contact 16 adjacent the bottom edge 14 of the channel. The sides 11 and 12 are sprung to tend to move toward each other in the vicinity of the lower edge 14, but they are restrained from also moving from such contacts along the line 16 to thereby provide a clamping action along such line of contact. The sides 11 and 12 flare away from each other upwardly from the line of contact 16, as shown most clearly in Figures 2 and 3. A hanger wire 20 is fixed to the channel 10 at the longitudinally central portion thereof. The hanger wire may include a hanger hook 21 or the like. The hanger wire extends downwardly through a hole or opening 17 in the top bend 15, and thence longitudinally along the channel and within the curve of the top bend 15 in nested relationship therewith, as most clearly seen in Figure 3. The longitudinally extending portion of the hanger wire 20 is indicated by the reference numeral 22. Crimps 23 and 24 are formed in the channel sides 11 and 12 and extend toward each other as indicated in Figure 3. These crimps are formed immediately below and parallel to the longitudinally extending portion 22 of the hanger wire and therefore capture the hanger wire in its nested relationship within the top bend 15. The crimps 23 and 24, extending as they do parallel to the longitudinally extending portion 22, which in turn is backed up by the bend 15, do not derogate significantly from the effectiveness of the clamping action along the length of the channel, even though the channel comprises an inexpensive metal of relatively low resiliency and yield strength in bending, such as for example, 5052–H34 aluminum of say .025 inch thickness or the like. If desired, the portion of the channel 10 immediately surrounding the longitudinally extending wire portion 22 may be provided with keying indents 26 which extend into the sides of the portion 22 to key the hanger wire and the channel against relative hinging motion. Such hinging motion may otherwise occur to the extent allowed by the hole 17.

One of the open ends of the channel may receive an indexing tab of the type illustrated in Figure 4. The channel side is adapted to be engaged between the outboard tabs 30 on the one hand and the central tab 31 on the other hand, the tabs 30 and 31 having sufficient resiliency to grip the channel side as they are pressed over it on opposite sides thereof. Within a flat flanged portion 32 is received a card 33 covered by a transparent shield 34 of cellophane or the like, the card 33 and shield 34 being retained by lugs 35.

Rather than being received in one of the open ends of the channel 10, the tab shown in Figure 4 may be received in a longitudinally extending slot 40 (Figure 2A) of appropriate length formed in the top edge 13 and extending through the top bend 15.

The above description of the invention should make it apparent that many details of the apparatus embodying the invention may be varied without departing from the teaching of the invention. Accordingly, the scope of the invention is not to be limited to precise details

of the specifically described embodiments but is to be defined by the following claims.

What is claimed is:

1. A filing device comprising a longitudinally extending channel of thin gauge sheet metal having two sides and top and bottom edges, the channel sides being integrally joined around a top bend extending longitudinally along the top edge of the channel, said sides being spaced from each other below said bend except along a longitudinally extending line of contact adjacent the bottom edge of the channel, said sides being sprung to tend to move toward each other at said lower edge but being restrained from so moving by said contact to provide a clamping action along said line of contact, said sides flaring away from each other upwardly from said line of contacts, a hanger wire fixed to said channel at the longitudinally central portion thereof, said hanger wire extending downwardly through a hole in said top bend and thence longitudinally along said channel and within the curve of said top bend in nested relationship therewith, the portion of said hanger wire which extends longitudinally along said channel extending straightly to a point where said wire terminates within said channel, and crimps extending toward each other from each of said channel sides immediately below and parallel to said longitudinally extending portion of said hanger wire to capture said wire in said nested relationship within said top bend, whereby assembly and interconnection of the channel and hanger wire may be inexpensively accomplished by crimping without any weldment or additional fastening means but at the same time without derogating significantly from the effectiveness of said clamping action along the length of said channel even though said channel may comprise an inexpensive metal of relatively low resiliency and yield strength in bending.

2. A filing device comprising a longitudinally extending channel of thin gauge sheet metal having two sides and top and bottom edges, the channel sides being integrally joined around a top bend extending longitudinally along the top edge of the channel, said sides being spaced from each other below said bend except along a longitudinally extending line of contact adjacent the bottom edge of the channel, said sides being sprung to tend to move toward each other at said lower edge but being restrained from so moving by said contact to provide a clamping action along said line of contact, said sides flaring away from each other upwardly from said line of contacts, a hanger wire fixed to said channel at the longitudinally central portion thereof, said hanger

wire extending downwardly through a hole in said top bend and thence longitudinally along said channel and within the curve of said top bend in nested relationship therewith, the portion of said hanger wire which extends longitudinally along said channel extending straightly to a point where said wire terminates within said channel, and crimps extending toward each other from each of said channel sides immediately below and parallel to said longitudinally extending portion of said hanger wire to capture said wire in said nested relationship within said top bend and keying indents formed in said channel sides and extending into the sides of said longitudinally extending portion of said hanger wire for keying said hanger wire and said channel against relative hinging motion.

3. A filing device comprising a longitudinally extending channel having two sides and top and bottom edges, the channel sides being integrally joined around a top bend extending longitudinally along the top edge of the channel, said sides being spaced from each other below said bend except along a longitudinally extending line of contact adjacent the bottom edge of the channel, said sides being sprung to tend to move toward each other at said lower edge but being restrained from so moving by said contact to provide a clamping action along said line of contact, said sides flaring away from each other upwardly from said line of contact, a hanger wire fixed to said channel at the longitudinally central portion thereof, said hanger wire extending downwardly through a hole in said top bend and thence longitudinally along said channel and within the curve of said top bend in nested relationship therewith, the portion of said hanger wire which extends longitudinally along said channel extending straightly to a point where said wire terminates within said channel, and crimp means in at least one of said channel sides immediately below and parallel to said longitudinally extending portion of said hanger wire for capturing said wire in said nested relationship within said top bend.

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