Oct. 31, 1967 G. A. RUBISSOW 3,349,775

VERTICAL FILE

Filed March 13, 1963

FIG. 1

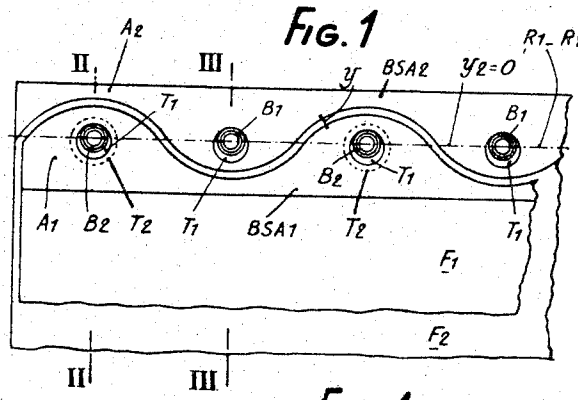


FIG. 2

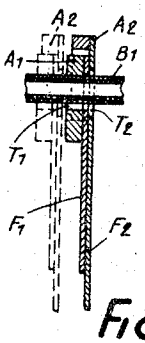


FIG. 3

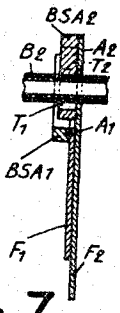


FIG. 9

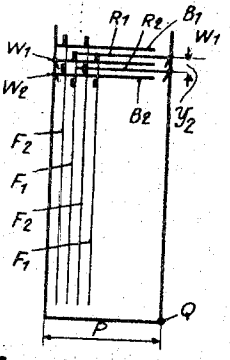


FIG. 4

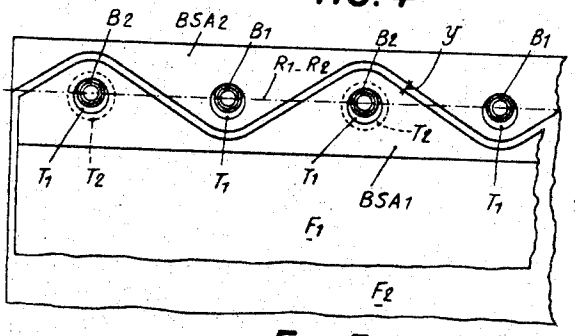


FIG. 7

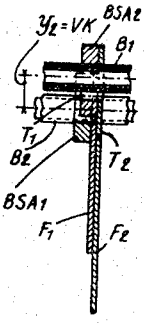


FIG. 8

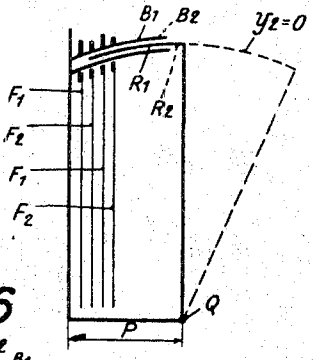


FIG. 5

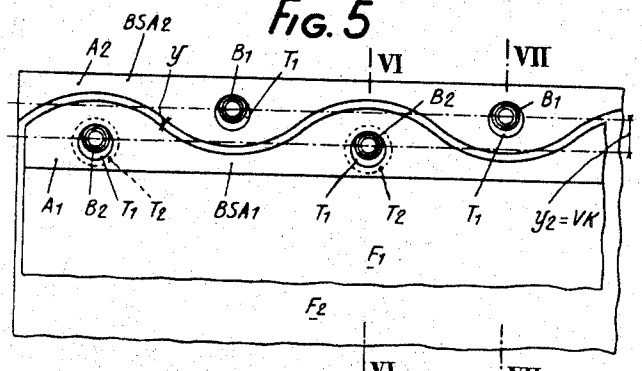


FIG. 6

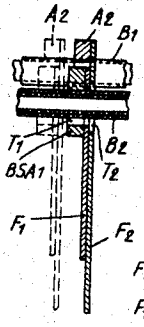
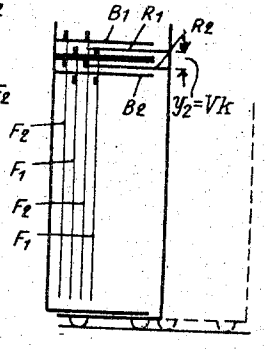


FIG. 10



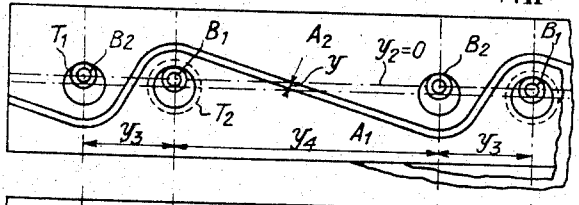


FIG. 11

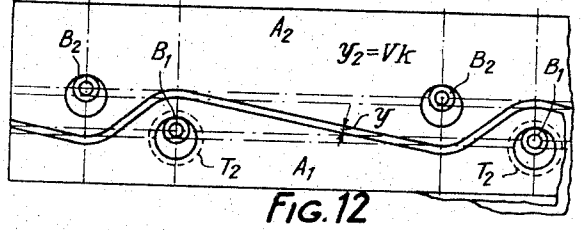


FIG. 12

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VERTICAL FILE

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4 Claims. (Cl. 129—8)

This invention relates to a vertical file for classifying two different types of suspension sheets, drawings, plans, photos, etc., by a vertical suspension of these two types of sheets on one row of telescopic support arms.

FIGURE 1 represents a side view of a form of two different types of sheets for a file, subject of this invention.

FIGURES 2 and 3 represent a side view in cross-section of FIG. 1 along the lines II—II and III—III.

FGURES 4 and 5 represent other forms of two types of sheets subject of this invention.

FIGURES 6 and 7 represent in cross-sectioned views of FIG. 5, along the lines VI—VI and VII—VII.

FIGURES 8, 9 and 10 represent diagrammatically a side view in cross-section of three different forms of a vertical file conformable to this invention.

FIGURES 11 and 12 represent in a side view another form of two different types of sheets and of supporting strips.

The file represented on FIG. 8 uses one row of telescopic support-arms, which support-arms, seen from the side, have the shape of a part of a circle, the center of which is the pivoting center Q of the axis of a pivotal axle around which the opening panel is limitedly pivoting, as it is indicated in dotted lines on this figure. The same support-arms seen from the top, have a rectilineal form.

Conformable to this invention two different types of sheets, type F1 and type F2 are suspended alternately on one single row of alternate telescopic support arms B2 and B1, corresponding alternately to these two types of sheets F1 and F2. The single row of these telescopic alternate support arms B2 and B1 comprises in itself the two rows R1 and R2 of such arms, one comprising the arms B2, the other comprising the arms B1. The distance Y2 between the respective horizontal planes passing through each of these rows R1 and R2 is thus equal zero, i.e. Y2=0, as this is shown on FIGS. 1, 2, 3, 4 and 8.

Conformable to this invention, the supporting strip BSA2 corresponds to the sheets F2, and BSA1 corresponds to the sheets F1. These strips are cut out in a form similar to a sinusoidal line, FIGS. 1, 2, 3, 5, 6 and 7, or in a zig-zag line eventually slightly rounded at the tops of the zig-zags, FIG. 4. By providing a necessary tolerance Y between the lower edge of the supporting strip BSA2 (of the sheets F2) and the upper edge of the supporting strip BSA1 (of the sheets F1), the sheets F1 and F2 can be nestled alternately one after the other, as this is illustrated on FIGS. 2, 3, 6 and 7, thus enabling to save the space due to the fact that the two neighbouring thicknesses of the two supporting strips BSA1 and BSA2 glued or otherwise affixed to the sheets F1 and F2, do not overlap one another. The vertical and horizontal thicknesses of these supporting strips and of these sheets is illustrated on FIGS. 2, 3, 6 and 7 on an abnormally enlarged scale to facilitate their illustration.

When, for example, supporting strips having a constant vertical thickness of 30 mm. are used, then in this specific case, a distance of about 35 mm. between the planes of the two rows R1 and R2 (i.e. Y2=35 mm.) will be necessary since a clearance of 5 mm. should be provided between the lower edge of the strip BSA2 and the upper edge of the strip BSA1 (i.e. Y=5 mm.).

FIGURE 4 shows the strips BSA2 and BSA1 as having a zig-zag line form and having a clearance Y equal to

about 2 to 5 mm. by way of example and not limitative. At the same time, Y2=0, as illustrated on FIGS. 1, 2, 3, 4, and 8.

It is obvious that in order to realize such a double suspension of two different types of sheets on one row of alternate telescopic support-arms when that means that Y2=0, the strip BSA2 of the sheets of the type F2 should be provided with supporting holes T1, through which the support-arms B1 of the alternate row R1 may pass, and on which these sheets F2 are suspended. The diameter of these alternate support-arms B1 may be equal or a little smaller than the diameter of the holes T1. In addition, the top of said sheets F2 in the areas adjacent to said second type of strips should be provided with clearance holes T2, illustrated in dotted lines on FIGS. 1 and 4, to permit the alternate support-arms B2 of the alternate row R2 to pass freely through these holes, preferably not touching them. These holes T2 may thus be either of a diameter equal to the diameter of the supporting arms B2, or may preferably be larger than this diameter than the diameter of the holes T1, to permit an easy sliding of the sheets F2 on the alternate support-arms B2 preferably without touching them. On the contrary, the supporting strip BSA1 for the sheets F1 is provided only with holes T1 to enable the alternate support-arms B2 of the row R2 on which these sheets F1 are thus suspended, to pass through these holes T1.

On FIGS. 1, 2 and 3, are shown the alternate rows R1 and R2; R1 may have (as a nonlimitative example) 2 or 3 or 4 supporting arms B1, and the row R2 may have 3 or 4 supporting arms B2, in spite of the fact that Y2=0.

FIGURES 5, 6 and 7 show another form of file having two rows of alternate support-arms R1 and R2, the distance between the planes passing through these rows Y2=VK. VK may be (as nonlimitative example) between 5 and 30 mm. depending upon the vertical thickness of the supporting strips BSA2 and BSA1. The form of these strips is also similar to the sinusoidal or zig-zag lines. The strips conforming to FIGS. 5, 6 and 7 have rows R1 and R2 which have between their planes a distance Y2=VK, of an agreed useful length. In practice (as a nonlimitative example) Y2 may be equal to 10 or to 15 mm. and this will already give very satisfactory results.

The types of files such as illustrated on FIGS. 8, 9 and 10 may be used in accordance with this invention. In the embodiment shown in FIG. 8 the single row of alternate supporting arms B1 and B2 comprises the alternate rows R1 and R2, i.e. Y2=0; however, if desired R1 and R2 could be spaced one from the other at a distance of Y2=VK, as shown in FIGS. 5, 6 and 7.

The strips BSA2 and BSA1 may be of various forms and of various materials, for example made of card-board, presspahn, tissue, plastic, very thin metal foil etc., or they may be obtained by folding the edge of the paper or other material used for the sheets themselves, which will increase the strength of the supporting strips formed by the edge of such sheets. Such so obtained supporting strips in question, are then cut out, conform to the suitable sinusoidal or zig-zag lines as described, and provided with holes in question.

The known types of opening panel of the file, according to FIGS. 8 and 9, opens by pivoting around the pivoting axle passing through a pivoting axis as shown in center Q. The alternate support arms B1 and B2, FIG. 8, are rigid with reference to the respective panels, for instance the male telescopic arm B1 being rigid with reference to the fixed back panel. The alternate support arms B1 and B2, FIG. 9, are each pivoting on their pivot W1 and W2 respectively, thus permitting the telescopic movement of these alternate support arms during the time when the opening panel pivots around the center Q to permit to

place therein or remove therefrom the desired sheets. The alternate support arms B1 and B2, FIG. 10, are rigid with reference to the opening panel and to the back panel. When opening this file by sliding as it is indicated in dotted lines, the sheets may be introduced therein or removed therefrom when the alternate support arms B1 and B2 are disengaged.

Sheets of the type F1 and F2 may be placed one after the other in a consecutive order F2, F1, F2, F1, F2, or in the order, F2, then F2 turned over, then again F2 (as the first F2), then F1, F2, a considerable saving of space in the operative depth P, FIGS. 8, 9 and 10, will thus be obtained. By using this invention, a much larger amount of sheets to be classified could be nested together in such a file, than in a file of same operative thickness P, but using only one type of sheets.

For a more harmonious distribution of the weight of the sheets upon the respective alternate support arms, it may be advisable, but not indispensable, that the respective holes T1 corresponding to the respective alternate support arms B1 and B2 (and that means the alternate support arms B1 and B2 themselves) be spaced one from another in the horizontal plane at a close useful distance Y3, FIGS. 11 and 12, for instance the neighbouring alternate support arms B1 and B2 could be placed one from the other at a distance of Y3=1½ to 2½ diameters of such alternate support arms B1 and B2, while the B2 will be spaced from its next neighbouring at its right side B1 at a distance and so on. The Y2 may be either equal to zero, FIG. 11, or be a small distance, for instance Y2=from ½ to 2 diameters of the holes T1, FIG. 12, this by way of example only. Such an arrangement will give, not a homogeneous zig-zag wavy line, but an unsymmetrically wavy one, shown in FIGS. 11 and 12, by way of example.

What I claim is:

1. A vertical file for suspension of a first type of sheets and a second type of sheets to be filed in combination, said file having a movable front opening section and has a stationary back section, upper portions of said sections being provided with a row of telescopic support arms, alternate ones of said support arms receiving said second type of sheets and the other of said support arms receiving said first type of sheets, each of said telescopic support arms composed of male and female support arms elements attached, respectively to one of said upper portions of said sections, each second type of sheets provided along its upper portion with a second type of supporting strips

and a second type of supporting holes corresponding to the alternate ones of said support arms and accordingly being suspended thereby, the area of said second type of sheets adjacent to said second type of supporting strips being provided with a row of clearance holes corresponding to said other support arms, which thus accordingly pass freely through said clearance holes, each of said first type of sheets being provided on its upper portion with a first type of supporting strips provided with one row of supporting holes corresponding to said other ones of said support arms upon which they are suspended, the lower edge of each said second type of support strips following the contour of a wavy line, the upper edge of each of said first type of supporting strips following said contour of said wavy line, said first mentioned and said second mentioned contours of wavy lines being in register with each other and having a narrow clearance space therebetween so that overlapping of the two types of supporting strips is avoided.

2. A vertical file as set forth in claim 1 wherein said contour of said wavy line is a sinusoidal line.

3. A vertical file as set forth in claim 1 wherein said contour of said wavy line is a zig-zag line.

4. A vertical file as set forth in claim 1 wherein said contour of said wavy line is composed of zig-zags, said zig-zags having their tops rounded.

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