Sept. 19, 1961 R. B. LARTER 3,000,509

SORTING DEVICE

Filed Feb. 23, 1960

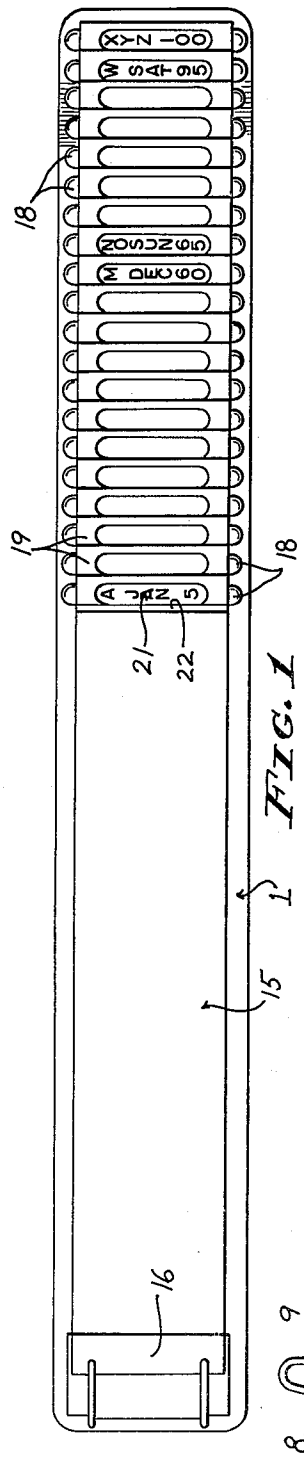


FIG. 1

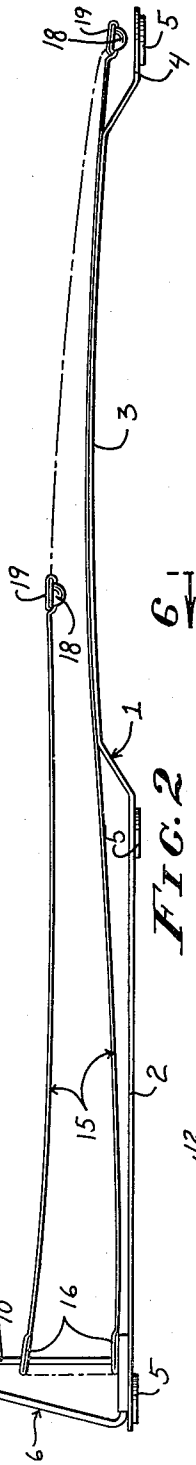


FIG. 2

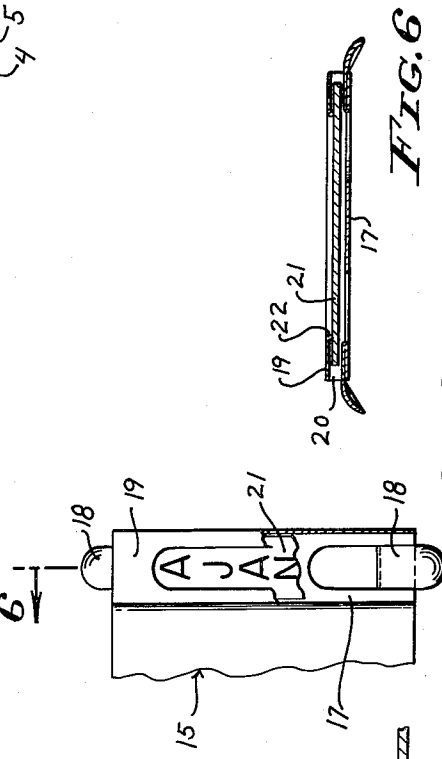


FIG. 5

FIG. 6

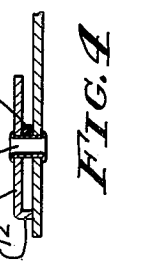


FIG. 4

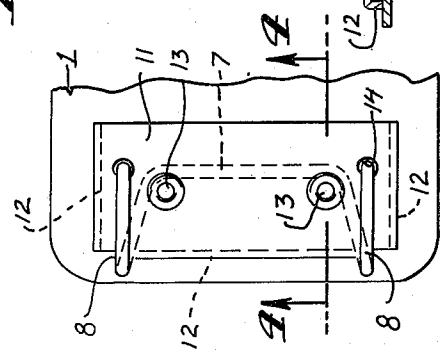


FIG. 3

INVENTOR.
RAYMOND B. LARTER
BY Lyon & Lyon
ATTORNEYS

United States Patent Office 3,000,509 Patented Sept. 19, 1961

3,000,509

SORTING DEVICE

Raymond B. Larter, P.O. Box 39652, Los Angeles, Calif.

Filed Feb. 23, 1960, Ser. No. 10,253
6 Claims. (Cl. 211—11)

This invention relates to hand sorting devices; that is, to devices which facilitate the sorting of checks, correspondence, orders, invoices, photographs, sales tickets, and many other office items. Included in the objects of this invention are:

First, to provide a sorting device wherein a plurality of leaves or strips formed of thin gauge material are hinged loosely to a common binder which permits substantial separation of the leaves, the leaves being of progressively greater length from top to bottom to form shingled extremities which may bear suitable index indicia.

Second, to provide a sorting device of this type which incorporates novel finger tabs which are readily grasped by the thumb and forefinger of the user to lift a leaf and the leaves above for insertion thereunder of material being sorted.

Third, to provide a sorting device of this type wherein the finger tabs and a retainer for index slips are formed integrally with the leaf, the finger tabs being formed by punching the tabs from the leaf and folding them laterally outwardly from the leaf, and the index retainer being formed by folding the adjacent end over and covering the openings from which the tabs were formed.

Fourth, to provide a sorting device which incorporates a novel base member, so arranged that the shingled portions of the leaves are raised from an underlying surface, in order that the finger tabs may be readily engaged without causing the fingernails of the user to engage the underlying surface.

Fifth, to provide a novel binder post means which permits ready separation of the leaves and expansion thereof, as material to be sorted is inserted between the leaves.

With the above and other objects in view, as may appear hereinafter, reference is directed to the accompanying drawings in which:

FIGURE 1 is a top view of the sorting device;

FIGURE 2 is a side view thereof with the bottom and top leaf shown in position, the thickness of the leaves being exaggerated and the intervening leaves being omitted;

FIGURE 3 is an enlarged, fragmentary plan view of the binder;

FIGURE 4 is a fragmentary, sectional view through 4—4 of FIGURE 3;

FIGURE 5 is an enlarged, partial plan, partial sectional view of the extended or shingled end of one of the leaves;

FIGURE 6 is a transverse sectional view thereof taken through 6—6 of FIGURE 5.

The sorting device includes a base member 1 formed of sheet metal. The base member is uniform in width and includes a flat portion 2 occupying slightly less than half its length, and a raised portion 3 extending the major part of the remaining portion of its length and joined at its extremity to a foot 4 which is coplanar with the flat portion 2. Pads 5 are provided under the base member 1. The pads preferably have relatively high coefficient friction so that the base member 1 tends to remain in position on an underlying surface.

At the extremity of the flat portion 2 there is provided a binder 6 formed of wire. The binder includes a U-shaped central portion 7 which lies upon the base member 1. The extremities of the central portion 7 are bent upwardly to form upwardly extending, parallel brace elements 8 which terminate in open loops 9. The extremities of the binder 6 form vertically, downwardly extending post elements 10.

The binder 6 is held in place by a retainer plate 11

having marginal flanges 12, approximately the thickness of the wire from which the binder 6 is formed. The binder is held in place by a pair of rivets 13, extending downwardly through the retainer plate 11 and base member 1 to clamp the central portion 7. The extremities of the post element 10 project into holes 14 provided in the retainer plate 11.

The post elements 10 carry a plurality of leaves 15. The leaves are formed of thin sheet or strip material, preferably thin gauge metal. Each leaf is provided with a folded and punched hinged end 16 which is vertically slidable on the post elements 10. The leaves progressively increase in length from the uppermost to the lowermost leaf so that the extended ends of the leaves are in shingled relation, as shown in FIGURE 1.

The projecting or shingled portion of each leaf 15 is downwardly offset as indicated by 17. This downwardly offset portion is provided with U-shaped slits adjacent each lateral end from which are folded finger tab elements 18. The tab elements 18 are folded laterally outward from the offset cross portion 17 with their extremities projecting laterally beyond the sides of the corresponding leaf 15. The extremities of the tab elements curve downward and are preferably pressed to provide upwardly rounded surfaces.

The extremity of each leaf 15 beyond the cross portion 17 is folded over the cross portion to form a cover strip 19 which covers the openings formed by the finger tab elements 18, and is spaced from the cross portion 17 to form a lateral or transverse slit 20 open at its ends. The slit 20 is adapted to receive an index slip 21 and the cover strip 19 is provided with a slot 22 to expose the index slip 21.

Operation of the sorting device is as follows:

The index slips 21 may be provided with various indicia, such as letters of the alphabet or months or days of a week, or numerical divisions as suggested in FIGURE 1.

Each of the leaves 15 may be readily raised by engaging the finger tab elements 18 between the thumb and first finger, or the thumb and second finger. Each leaf as it is raised also raises all the leaves superposed thereon so that material being sorted may be readily inserted between the appropriate leaves.

By reason of the raised portion 3 of the base member 1, which underlies the shingled portions of the leaves 15, the finger tab elements 18 may be readily engaged without one striking the fingernails against the underlying surface on which the sorting device is resting.

The vertical post elements 10 of the binder are made sufficiently high that the various leaves may be spaced a substantial distance from each other to accommodate a large number of interleaved sheets.

While a particular embodiment of this invention has been shown and described, it is not intended to limit the same to the exact details of the construction set forth, and it embraces such changes, modifications, and equivalents of the parts and their formation and arrangement as come within the purview of the appended claims.

What is claimed is:

1. A sorting device, comprising: a stack of leaves having ends disposed in shingled relation; each leaf including at its shingled end a pair of cupped tabs folded laterally outwardly therefrom beyond the side margins of said leaf and an end element folded over said shingled end to form a transversely extending index slip receiving slot open at its ends, said end element being slotted to expose an index slip in said slot.

2. A storing device, comprising: a stack of leaves having ends disposed in shingled relation; each leaf being folded at its shingled end to form a transverse index slip receiving slot, one portion of said folded end having U-shaped slits and the material defined thereby folded

laterally outward beyond said leaf to form finger tabs.

3. A sorting device, comprising: a base strip having a flat portion and a foot portion adapted to rest on an underlying surface, and a raised portion joining said flat and foot portions; a binder at the end of said flat portion remote from said raised portion; a stack of leaf strips loosely hinged to said binder and extending over said base strip, said leaf strips progressively increasing in length from the uppermost to the lowermost leaf strip whereby the distal ends of said leaf strips are in shingled relation, said raised portion elevating the shingled ends of said leaf strips above said underlying surface; and laterally projecting finger tabs at the shingled ends of said leaf strips.

4. A sorting device, comprising: a base strip having a flat portion and a foot portion adapted to rest on an underlying surface, and a raised portion joining said flat and foot portions; a binder at the end of said flat portion remote from said raised portion; a stack of leaf strips loosely hinged to said binder and extending over said base strip, said leaf strips progressively increasing in length from the uppermost to the lowermost leaf strip whereby the distal ends of said leaf strips are in shingled relation, said raised portion elevating the shingled ends of said leaf strips above said underlying surface; each leaf strip being folded at its shingled end to form a transverse index slip receiving slot, one portion of said folded end having an opposed pair of U-shaped slits and the material defined thereby being folded laterally outwardly beyond said leaf strip to form finger tabs.

5. A sorting device, comprising: a base strip; a retainer plate at one end of said base strip; a binder having a U-shaped central portion clamped between said base strip and retainer plate, upwardly directed sloping brace portions at the extremities of said central portion and vertically upstanding legs disposed between the upper ends of said brace portions and said retainer plate; a stack of leaf strips loosely hinged to said upstanding legs, said legs normally extending a substantial distance above said stack of leaf strips whereby said leaf strips may be separated vertically from each other to receive therebetween a plurality of sheets to be sorted; said leaf strips progressively increasing from said uppermost leaf to said lowermost leaf whereby the distal ends of said leaf strips are disposed in shingled relation.

6. A sorting device, comprising: a base strip having a flat portion and a foot portion adapted to rest on an underlying surface, and a raised portion joining said flat and foot portions; a binder at the end of said flat portion remote from said raised portion, said binder having upstanding legs; a stack of leaf strips loosely hinged to said upstanding legs, said legs normally extending a substantial distance above said stack of leaf strips whereby said leaf strips may be separated vertically from each other to receive therebetween a plurality of sheets to be sorted; said leaf strips progressively increasing from said uppermost leaf to said lowermost leaf whereby the distal ends of said leaf strips are disposed in shingled relation.

References Cited in the file of this patent

UNITED STATES PATENTS

2,335,379	Bersin	Nov. 30, 1943
2,765,925	Raach	Oct. 9, 1956
2,876,907	Amberg	Mar. 10, 1959