

March 14, 1961

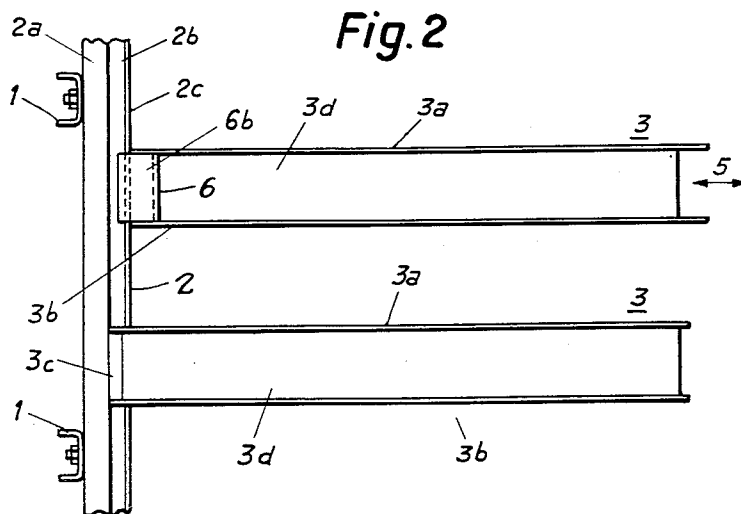
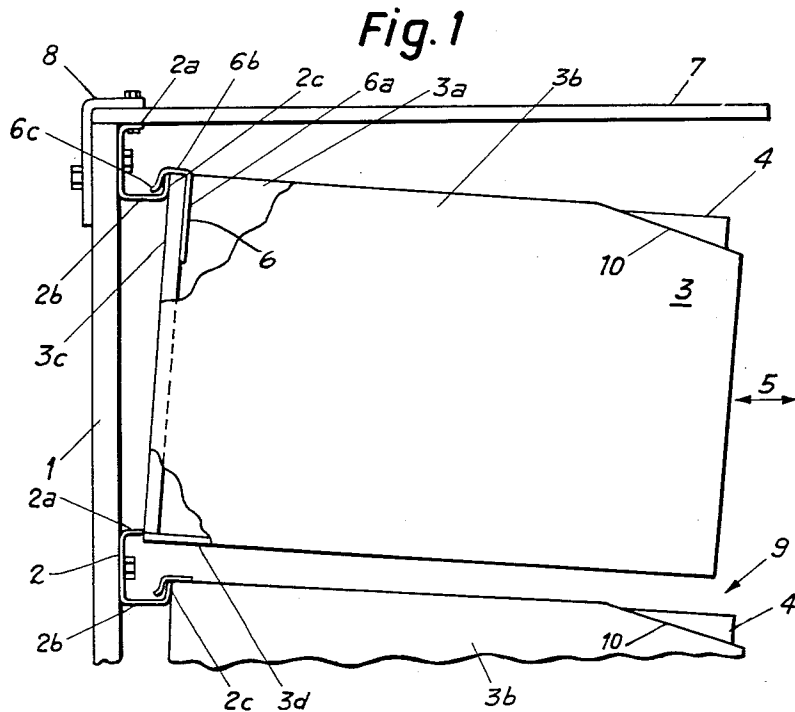
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2,974,807

SUSPENSION FILING RACK

Filed Oct. 30, 1956

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

Fig. 3

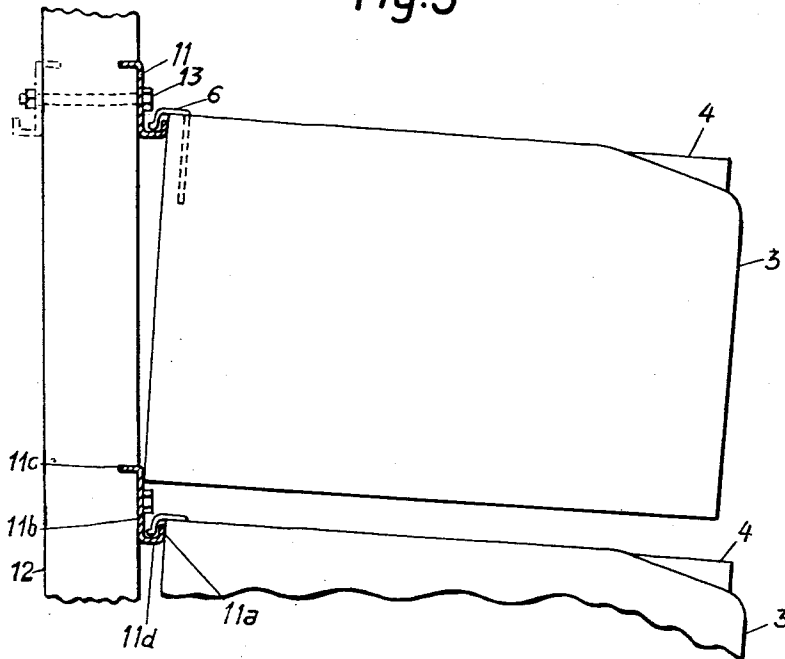


Fig. 4

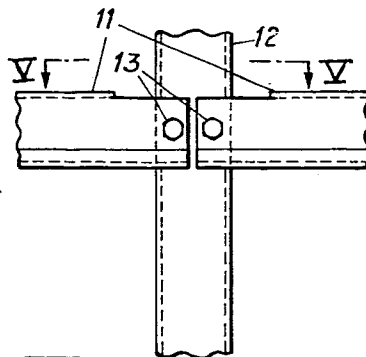


Fig. 5

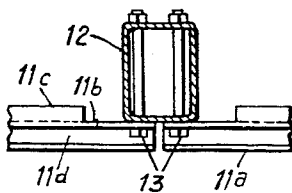
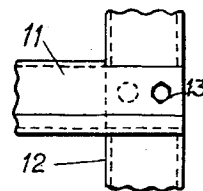


Fig. 6



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SUSPENSION FILING RACK

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1 Claim. (Cl. 211-126)

The present invention concerns a suspension filing rack for documents and similar material of uniform size in which use is made of horizontal suspension rails.

There are already in existence various suspension filing racks for the safe-keeping of records in which folders containing written matter can be suspended singly from horizontal carrying rails and freely moved along them. Such suspension filing racks are usually arranged for slim document folders which are suspended by their upper edges from the carrying rails, or are intended for loose-leaf books which have suitable hangers on the spine and may be kept in a horizontal or oblique position in the filing stand.

These familiar suspension filing systems have given satisfactory service, particularly where the documents are frequently referred to, must be readily accessible and call for detailed sub-classification.

For many purposes, for example for storage or filing drawings and the like, there is, however, a desire to keep large quantities of written matter in order and easily accessible, it being sufficient, however, to divide the material into groups or according to numbers without binding the separate sheets. Moreover for such storage purposes, a filing system is required which is economical in space and as inexpensive as possible so that costs may be kept within reasonable limits when the amount of material to be stored is large. For a use such as this, the suspension filing racks known hitherto do not represent the optimum solution, for in regard to subdivision, labelling and handling, they answer considerably more detailed requirements than called for in the present case, and this unnecessarily increases the cost and the space occupied.

The present invention concerns a suspension filing rack of the kind described above, which is particularly suitable for storing records. It is characterized by containers in which papers in folders or loose sheets may be placed and which are provided with hangers on their rear narrow sides, and by horizontal rails placed one above the other and parallel to one another at a certain vertical interval and having a channel-like lower edge on which the containers may be suspended so as to slide endwise by means of their hangers, the interval between the horizontal rails being selected in such a manner that the suspended containers rest with the bottom of their rear narrow sides on the upper part of the horizontal rail immediately below, which is formed as a sliding surface.

In the drawings embodiments of the invention are represented and shown:

Fig. 1 is an elevation of a suspension filing rack and

Fig. 2 is a top plan view of the suspension filing rack according to a first embodiment of the invention,

Fig. 3 is an elevation of another embodiment of the invention,

Fig. 4 is a view of the attachment of two suspension rails to an upright,

Fig. 5 is a plan view partly in section taken along the line V-V in Fig. 4,

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Fig. 6 is a view of the attachment of a suspension rail to an extreme outside upright.

Referring now more particularly to the drawings, there is disclosed a stand for a suspension filing rack with up-
rights 1 and horizontal rails 2 arranged parallel to one
another and vertically above one another at a predeter-
mined interval, said rails being bolted or welded to the
uprights, suspended on hooks or cut-outs, or secured in
some other suitable manner. This rigid stand can be
provided in the usual way with a base (not shown) and
set up in a self-supporting manner in the room, all side
walls being dispensed with, or the uprights can be secured
to a vacant wall or to the rear of cupboards. If desired,
the stand can have a top 7 which is secured to the up-
rights by means of the angle iron 8. Needless to say, side
walls can also be provided at both ends of the stand,
but such casings are not normally required, for the stand
is self-supporting.

The horizontal rails 2, according to Figs. 1 and 2,
are approximately L-shaped and secured to the upright
1 by their vertical leg. The upper edge 2a of the vertical
leg is bent round approximately at a right angle and
points in the same direction as and roughly parallel to
the horizontal leg 2b, but is shorter than the latter, meas-
uring, by way of example, only one third of its length.
The horizontal leg 2b is bent up along its front edge 2c,
so that a shallow longitudinal channel is formed in which
the file containers are suspended. The horizontal rails 2
can be made of any material that is sufficiently rigid, for
example, of iron or other metals, or of plastic. Care
must, however, be taken that the faces of the upper edge
2a and of the turned up part 2c, which serve as sliding
surfaces, are as smooth as possible.

The horizontal rails 2 of the stand serve for the sus-
pension of said containers 3 which can be slid along them
unimpeded by partitions. The containers, which are here
shown, by way of example, as taking the form of boxes
consisting of two rigid or relatively stiff side walls 3a
and 3b, the rear narrow side 3c and the bottom 3d, are
open at the front and the top. These containers 3 serve
to accommodate the written matter 4 in folders or as
loose sheets which may be inserted or extracted singly
or together in the direction of the arrow 5. Any folders
of material can be labelled in a conventional manner or
distinguished by means of riders and signals. The con-
tainers 3 are suspended by means of the hanger 6 which
is fixed to the rear narrow side 3c and consists of a strip
of sheet metal bent in hook shape. The strip has an ex-
tension 6a riveted or otherwise secured interiorly to the
narrow side 3c, which then projects above the narrow
side 3c, is bent at 6b to form a downward inclined arm
6c by which the containers 3 may be suspended on the
upturned edge 2c of the horizontal rails. The arm 6c
is formed in such a way that the suspended containers 3
can easily slide along a first sliding surface formed by
the bent portion 2c. The suspended containers 3 are
supported by the lower end of their rear narrow side 3c
against the face of the edge 2a of the horizontal rail 2
which is bent forward and forms a second sliding surface.
Since this edge 2a is, as already mentioned, shorter than
the horizontal leg 2b, the suspended containers assume an
oblique position as shown in Figs. 1 and 2. This is very
desirable for many purposes, for since the staggering of
the rows thus obtained now permits a clear view in the
direction of arrow 9 of the labelled front corner of the
matter in each container or of the individual folders, the
interval between the containers set one above the other
can be kept very small. An oblique cut-away portion 10
at the front of the sides 3a and 3b improves the view of
the written matter 4 and makes it easier to read a number
or other means of identification marked thereon. If
desired, the bottom 3d on the open side of the container

can be provided with a low vertical arm to prevent the written matter 4 from slipping out.

The horizontal rails can according to Figs. 3 to 6 also be essentially Z-shaped. The lower of their two parallel legs is likewise provided with an upturned edge 11a so that a longitudinal channel is obtained in which the suspension hooks 6 of the containers 3 engage. The web 11d of the suspension rails runs normal to the uprights 12 and lies flush against them. The leg 11c points in an opposite direction to the leg 11d and at the intersection of the horizontal rails and the uprights the upper parallel flange 11c of the horizontal rails is cut away across the width of the upright (Fig. 4).

According to Fig. 6, the stand is braced at the outermost uprights 12 very simply by the upper parallel flange 11c of the horizontal rail 11 being cut away for such a length and the horizontal rail being secured to the upright in such a way that the remaining portion of the flange 11c abuts against it. In order that the end of the horizontal rail is approximately flush with the upright, the horizontal rail is always fixed at the outermost uprights in the second hole, contrary to the method of fixing according to Figs. 4 and 5. In this way the remaining parallel flange 11c rests against the upright 12 and thus braces and stiffens the whole stand in such a manner that it is secured in a vertical position. Since this method of fixing is applied at the left and right outermost uprights, the stand, which may be any length desired, acquires its lateral support.

In this embodiment (Figs. 3 to 6) the suspended containers 5 with the written matter 4 rest with their rear lower narrow side against the web 11b of the supporting rail 11 immediately below, which is arranged at an appropriate interval for this purpose, the containers 3 again taking up a slightly oblique position.

A suspension filing rack of this design affords an economy in space in a horizontal direction when compared with the design according to Figs. 1 and 2, for the overhang of the horizontal rails can be reduced. Moreover the abrasion and danger of wear of the rear lower portion of the containers against the sliding surface of the suspension rail is reduced and cannot result in the containers being damaged.

The containers 3 may be of any width, but should be so made that they do not tilt when slid longitudinally. To confer greater stability, the containers may, if desired, also be closed at the upper narrow side, by way of example, from the suspension hook 6 to the beginning of the cut-away portion of the sides 3a, 3b. For storing documents sensitive to light and dust, or other records, containers without the cut-away portion 10, with a continuous top and a closure in the form of a lid or flap at the front, can also be provided.

The suspension hooks 6 reproduced in Figs. 1, 2 and 3 may also take another appropriate form. For example, instead of a sheet metal strip covering the whole narrow side 3c, two hooks can be used, but in this case they should be as far apart as possible. These hooks may, by way of example, be made from metal strip or from wire. If the narrow side 3c consists of thin material, as for instance of the same material as the sides 3a and 3b, it may also be of advantage to fix a metal strip on the outside and inside of the narrow side 3c and to bend them together to form a suspension hook. Further, the surface of the narrow side 3c resting against the rail edge 2a can be provided with a strip of sheet metal as a protection. In order to reduce abrasion further at this spot, the angled leg 2a can be bent so that its edge points to the horizontal leg 2b. To increase their life, the sliding surfaces of the horizontal rails 2 can also be covered with suitably shaped sheet metal sections. It is also possible

to bend the front edge 2c of the horizontal leg 2b downwards and then backwards to form a sliding channel.

The stand reproduced in Figs. 1 and 2 is constructed as a suspension filing rack with containers on one side only. Needless to say, the uprights can be provided with suitable horizontal rails 2 on both sides, so that the front and rear sides of the stand can be provided with containers 3, as indicated in Fig. 3; the front and rear rails being secured with the same bolts. If desired, auxiliary fixtures can be suspended on the horizontal rails to facilitate filing work, by way of example, a tablet chart or the like.

One of the special advantages of this suspension filing rack is that the containers are freely slidable without partitions. The absence of side walls enables the reserve space to be concentrated in one spot for each installation and accordingly kept proportionally smaller than in systems with partitions, especially in the case of long stands. As matter is added to or extracted from the sides, the containers may be slid without obstruction from supports, thus ensuring easy and simple operation.

Various changes and modifications may be made without departing from the spirit and scope of the present invention and it is intended that such obvious changes and modifications be embraced by the annexed claim.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

A suspension filing rack comprising at least one vertical rail, at least one upper horizontal rail, securing means securing said upper horizontal rail to said vertical rail, another lower horizontal rail secured to said vertical rail below said upper horizontal rail, each of said horizontal rails being substantially Z-shaped in cross section and having a top edge portion, a channel-shaped lower edge portion and an intermediate longitudinal portion which rests against said vertical rail, said top edge portion extending substantially perpendicularly to said longitudinal portion and in opposite direction to said lower edge portion, said top edge portion being provided with recesses therein, said vertical rail being received in said recesses to brace said frame structure, said other lower horizontal rail also being provided with a recess for receiving said vertical rail, said lower edge portion of said upper horizontal rail and said other lower horizontal rail comprising a bent front portion and a flange portion between said front portion and said longitudinal portion, said flange portion extending substantially parallel to said top edge portion and said front portion extending substantially parallel to said longitudinal portion, a file case provided with a suspension member extending beyond said file case at one end and rearwardly therebeyond and engaging said channel-shaped lower edge portion of said upper horizontal rail, said other lower horizontal rail being positioned below said upper horizontal rail at a distance in relation to the overall height of said file case so that a lower portion of said file case engages the intermediate longitudinal portion of said other lower horizontal rail and said file case is secured to said suspension filing rack at a minimum distance from said vertical rail.

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