G. ESMARIAN.

FILING SYSTEM.

APPLICATION FILED JUNE 23, 1915.

1,166,825.

Patented Jan. 4, 1916.

2 SHEETS—SHEET 1.

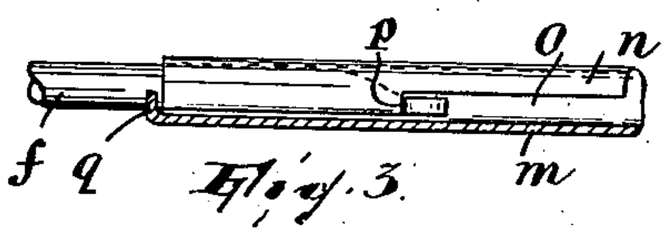

Fig. 3.

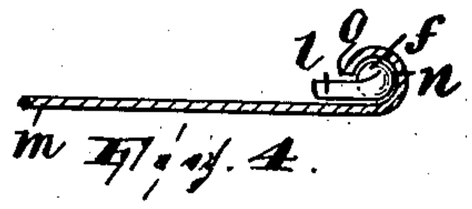

Fig. 4.

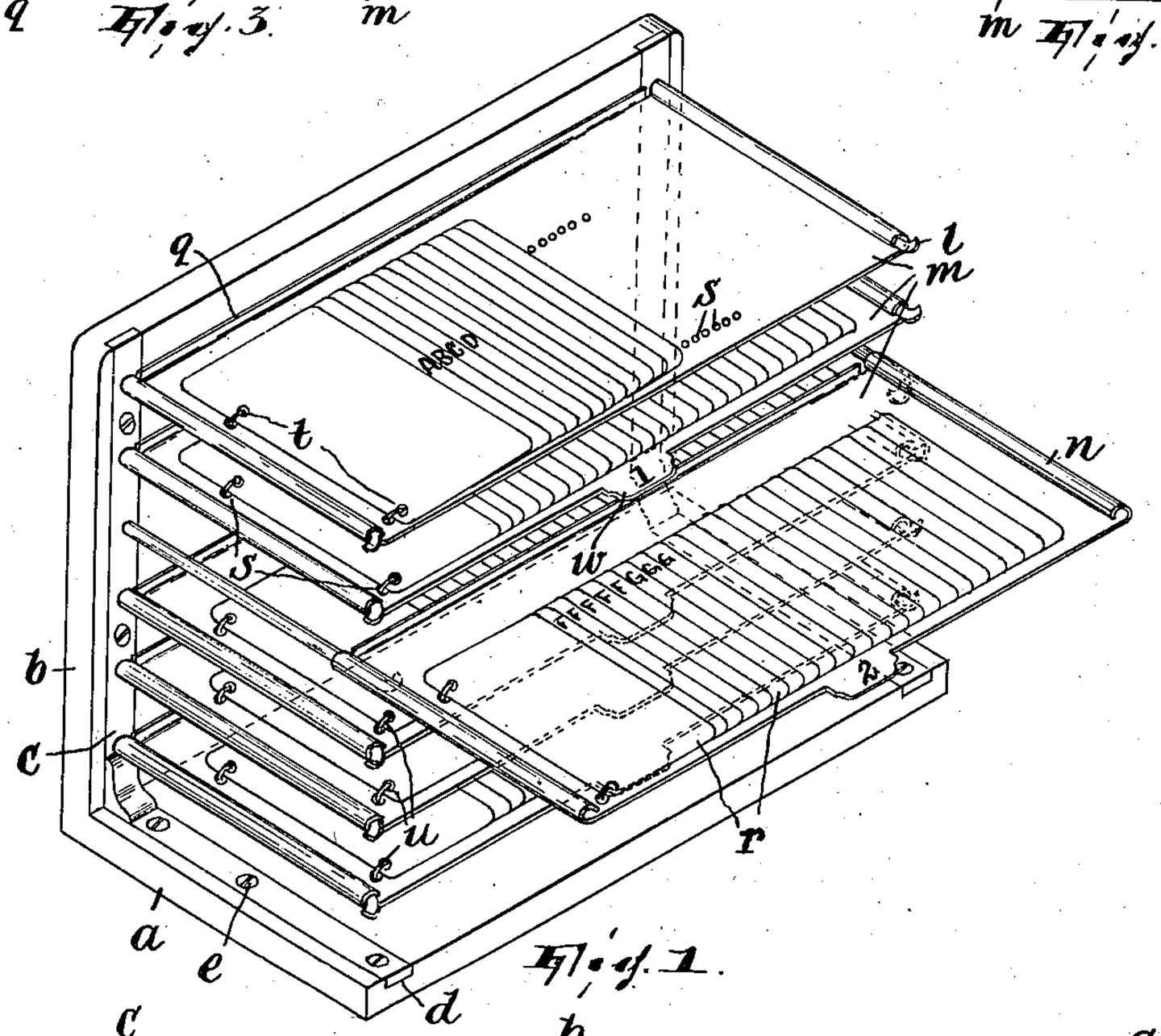

Fig. 1.

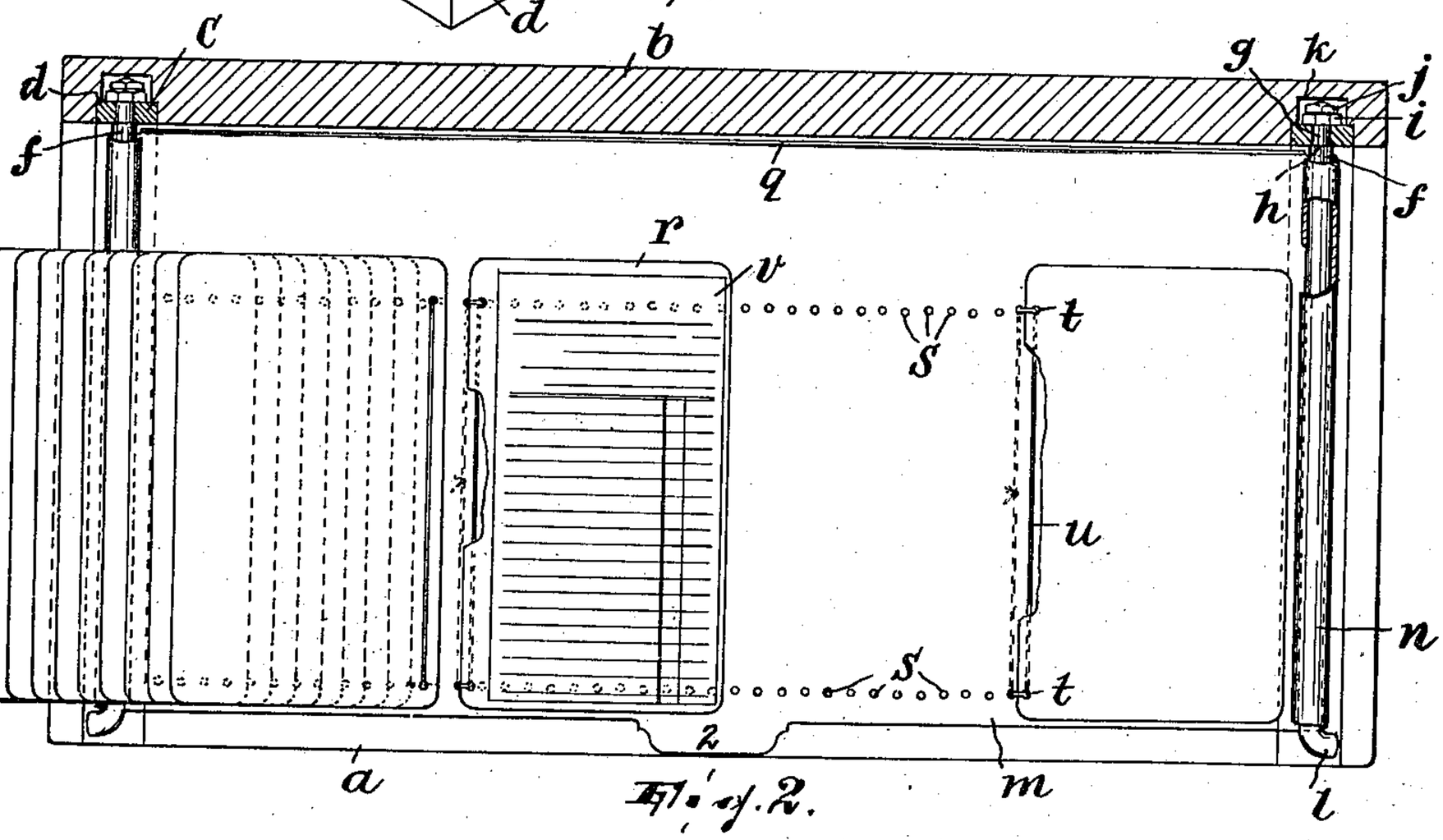

Fig. 2.

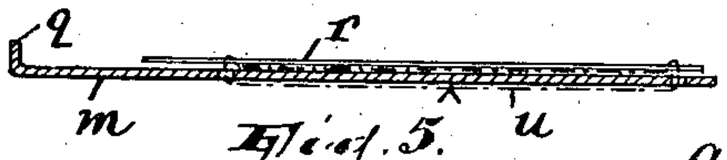

Fig. 5.

WITNESS

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2 SHEETS—SHEET 2.

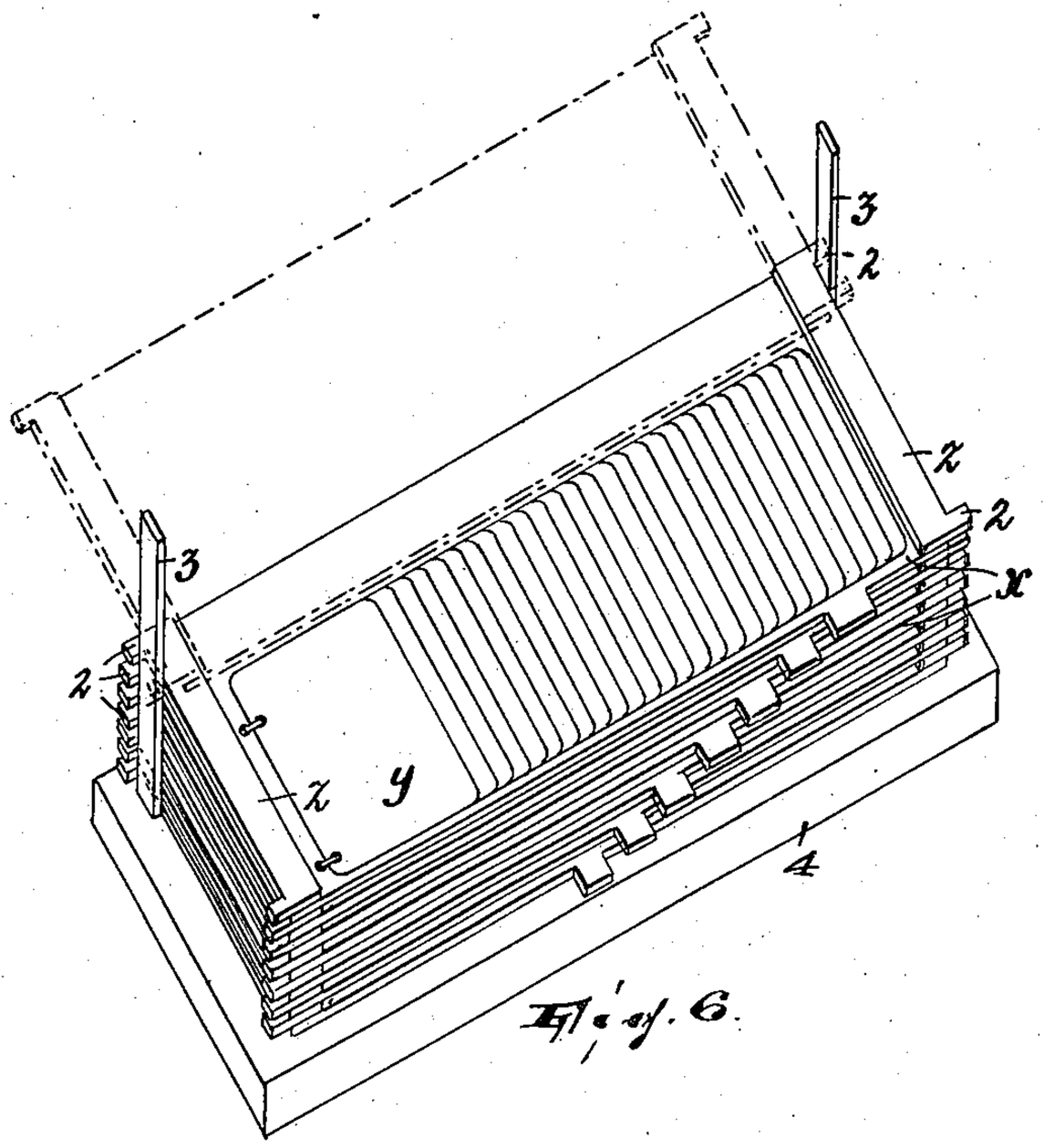

Fig. 6.

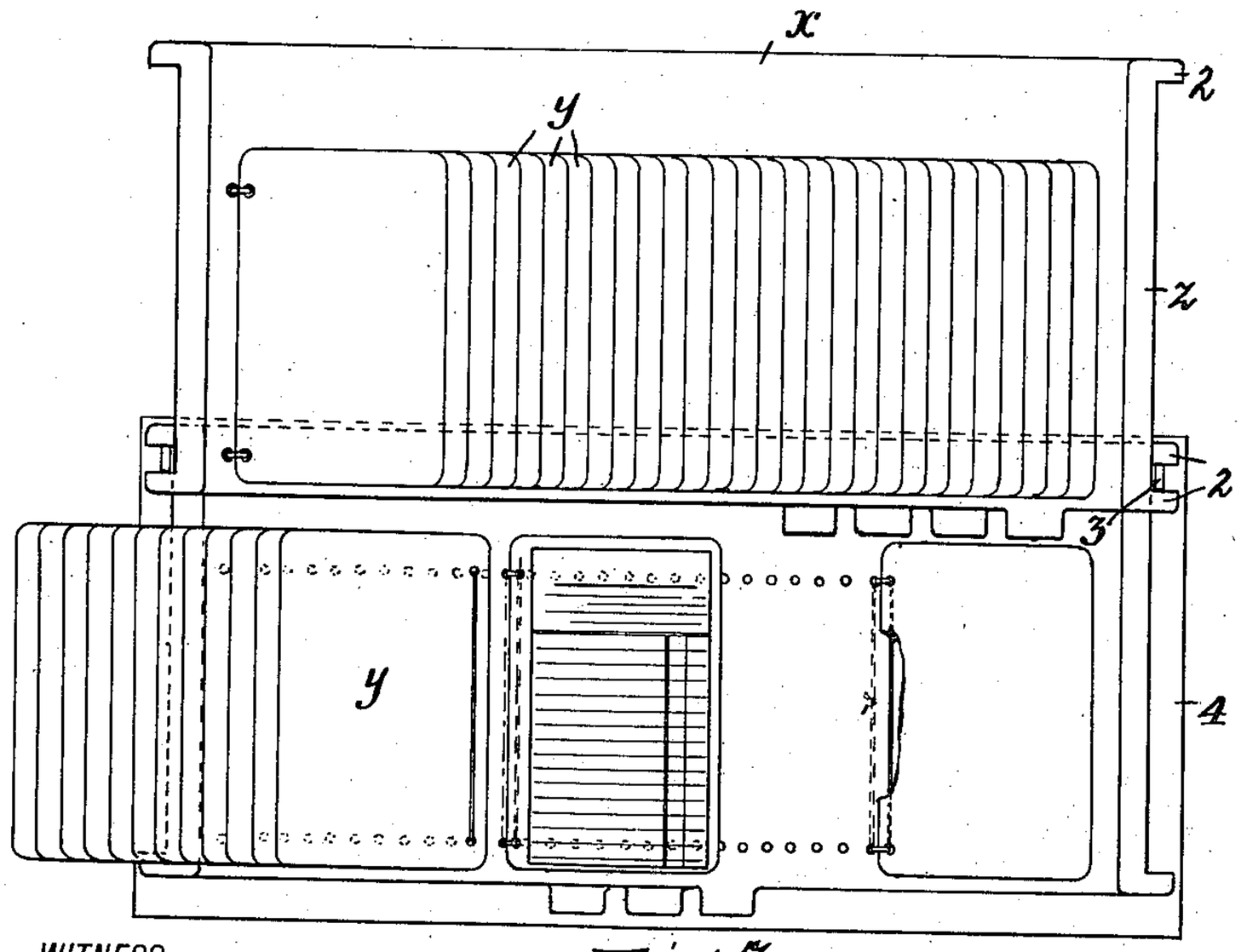

Fig. 7.

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FILING SYSTEM.

1,166,825. Specification of Letters Patent. Patented Jan. 4, 1916.

Application filed June 23, 1915. Serial No. 35,855.

To all whom it may concern:

Be it known that I, GARABED ESMARIAN, an Armenian, residing at Paterson, in the county of Passaic and State of New Jersey, have invented certain new and useful Improvements in Filing Systems, of which the following is a specification.

This invention relates to filing systems and it consists in certain improvements in filing systems of the class wherein stiff sheets are employed for separating in classified arrangement charge slips, bills and the like papers in filing them, the said improvements being designed principally to facilitate and expedite the filing of papers in as well as their removal from the apparatus and to provide for the accommodation in compact and space-saving disposition of a large number of papers.

According to this invention the series of leaves or spacers are arranged flatwise in overlapping disposition on a plate or tray to which they are all pivotally connected, each at the edge thereof adjoining the plate. A large number of papers may be filed away by the employment of an arrangement of this kind, and in addition it is a simple matter to locate the place to which it is desired to have access and then fold back all the leaves or spacers to one side thereof.

In one form of the apparatus in which filing means such as that above indicated is included, the several units are arranged one above another on horizontal supports on which they may slide horizontally to permit any one to be drawn out clear of the others, stops being employed to limit their sliding movement.

In another form of the apparatus (designed to be used as an auxiliary to that above referred to, although it may take the place thereof in some instances), the units are filed one upon another in a frame which at once affords means to keep them in orderly disposition and permits them to be slid horizontally, individually.

In the accompanying drawings, Figure 1 is a perspective view of that form of the apparatus which is first referred to above; Fig. 2 is a plan view thereof showing certain parts in section; Figs. 3 and 4 are sectional detail views illustrating the manner in which the plate to which the leaves or spacers are attached is connected to its supports; Fig. 5 shows the manner in which the leaves or spacers are connected to said plates; Fig. 6 is a perspective view of the other form of the apparatus; and, Fig. 7 is a plan view thereof.

Referring, first, to Figs. 1 to 5, the frame of the apparatus comprises a bottom wall *a* and a back wall *b* which are sustained in rectangular disposition by means of angular metallic braces or angle irons *c* inset in grooves *d* in said walls and secured therein by screws *e* or otherwise.

Projecting horizontally from the upright portions of the angle irons *c* are pairs of rods *f*, the rods in each pair being arranged in a horizontal plane. Each rod is preferably circular in cross-section and has one end reduced, as at *g*, and forming a bearing therefor in the upstanding part of the corresponding angle iron *c*, the rod being thus adapted to turn on its own axis in the angle iron. The rod is held against longitudinal movement on the one hand by the shoulder *h* and on the other by the nut *i* and lock nut *j*, which are received in a counter groove *k* of the groove *d*. The free end of each rod is flattened and turned off laterally, as at *l*.

m designates the plates to which the leaves or spacers are attached. These are formed of sheet metal and have opposite edges *n* thereof rolled back in tubular form. The edges of each plate thus forming rolled bearings or supporting portions thereon are cut away from one of the other two edges nearly toward the relatively opposite (or fourth) edge of the plate to form slots *o* terminating in stops *p*. Preferably the last-named (or fourth) edge of the plate is upturned, as at *q*.

In assembling the plates *m* and rods *f* with the frame, the rods are passed through the rolled bearing portions *n* of the plates and their reduced ends fitted into the upright portions of the angle irons *c*, whereupon the nuts *i j* are applied to the rods, leaving them free to turn in the angle irons, and finally the angle irons are attached to the walls *a* and *b*.

The rods *f* are a trifle longer than the rolled portions *n* of the plates, and when the rods are turned so that their hooked ends *l* stand as shown in Fig. 2 the plates are confined against movement away from the wall *b*; but on turning the rods into the position shown in Figs. 3 and 4, their hooked ends *l* stand opposite the slots *o* in

the rolled portions of the plates and permit the latter to be withdrawn until said hooked ends abut the stops *p*.

The leaves or spacers are formed of any suitable stiff sheet material. They are attached to the plates as follows: Each plate has, extending parallel with the wall *b*, two lines of perforations *s*, each perforation in one line being opposite a perforation in the other in a perpendicular line extending from the wall *b*. The leaves or spacers *r* are arranged on the plate *m* in series so that they overlap each other uniformly, each leaf or spacer exposing only the margin of the leaf or spacer next below it. The edges of the leaves or spacers which are next adjacent to the plate have perforations *t* in alinement with the lines of perforations *s* in the plate, and threaded through the perforations *t* in each leaf or spacer and a pair of perforations *s* in the plate is a cord *u* or other flexible device whose ends may be tied together as shown. Given the stated overlapped disposition of the leaves or spacers and the fact that they are individually hinged or pivoted to the plate, they may all lie substantially flatwise on the plate, so that the whole presents comparatively little thickness and yet, with suitable indices on the exposed edges of the leaves or spacers, it is a simple matter to open the series as between any two adjoining leaves or spacers by folding or turning over the left-hand one of such two leaves or spacers and consequently all the others to the left of it. The indices referred to are shown in Fig. 1 as A, B, C, etc.; but other characters may of course be used.

In the system shown in Figs. 1 and 2 it is designed that the second (from the top) to the sixth unit (each comprising a plate and the leaves or spacers thereon) be employed to receive the bills or other sheets *v* to be filed away, while the topmost unit may serve as an index to the other five units, the leaves *r* in that case having words, names, or the like inscribed thereon whose initial letters are the same as their respective indices, together with numbers, such as 1 to 5, referring to certain of the other five units, the plates *m* of which may have projecting tabs *w*, bearing such numbers. Thus, if it is desired to locate the place where any particular bill is or is to be filed, for instance a bill bearing the name "Smith", the user refers to the leaf in the topmost unit bearing the index "S" and thereon to the name "Smith" and then to the number "5" opposite "Smith", which number indicates that the bill is filed in the unit bearing "5" on its tab.

The apparatus shown in Fig. 6 has been designed for the permanent filing of bills or papers which in the apparatus shown in Figs. 1 and 2 have become "inactive", although it may be used in the same manner as the apparatus shown in Figs. 1 and 2. The plates *x* and leaves or spacers *y* may be formed and arranged substantially as the corresponding parts *m* and *r* already described, excepting that in this case the plates *x* have at the edges thereof corresponding to the rolled edges of the plates *m* the strips *z* attached thereto, said strips having outwardly projecting spaced lugs 2. The strips *z* serve to space the plates from each other and at the same time their lugs 2 limit the horizontal movement of one or more of the plates to uncover the one to which access is to be had, the said lugs being adapted to contact with the uprights 3 upstanding from a base 4.

In the claims I use the term leaf or leaves to define the members *r* and *y* regardless of whether or not they are employed as spacers or simply as shown and described in connection with the topmost unit in Fig. 1.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. A filing means comprising a flat plate, a series of leaves arranged flatwise thereon and overlapping each other substantially uniformly, and flexible devices threaded through the leaves and plate and affording individual pivotal connections between the leaves and plate.

2. In combination, a frame comprising an upstanding member, pairs of horizontal rods projecting from said member at different elevations, one above another, horizontal plates slidably supported on and movable longitudinally of said rods, and a series of overlappping leaves resting upon and pivotally attached to each plate.

3. In combination, a frame comprising an upstanding member, pairs of horizontal rods projecting from said member at different elevations, one above another, horizontal plates slidably supported on and movable longitudinally of said rods, and a series of overlapping leaves resting upon and pivotally attached to each plate, said plates and rods having coacting stops limiting the movement of said plates in one direction.

4. In combination, a frame comprising an upstanding member, pairs of horizontal rods projecting from said member at different elevations, one above another, horizontal plates slidably supported on said rods and having rebent portions receiving the rods, and a series of overlapping leaves resting upon and pivotally attached to each plate.

5. In combination, a frame comprising an upstanding member, pairs of horizontal rods projecting from said member at different elevations, one above another, said rods being revoluble on their own axes in said member and having hooked free ends, hori-

zontal plates slidably supported on said rods and having rebent portions receiving the rods, and slots in said rebent portions extending to the ends thereof adjoining the free ends of the rods, and a series of overlapping leaves resting upon and pivotally attached to each plate, said rods being adapted to be turned in said member to bring their hooked ends into and out of registry with the slots.

6. In combination, a series of plates arranged substantially horizontally, one above the other, a series of leaves arranged upon each plate in overlapping disposition, each leaf being pivotally connected to the plate, each plate being movable horizontally, and a supporting means for the plates, said plates and the supporting means having means to guide each plate in a definite path of movement and limit the movement of said plate in each direction.

In testimony whereof I affix my signature.

GARABED ESMARIAN.