Aug. 3, 1943. M. GRUNT 2,326,029

FILING SYSTEM

Filed Oct. 31, 1941 2 Sheets-Sheet 1

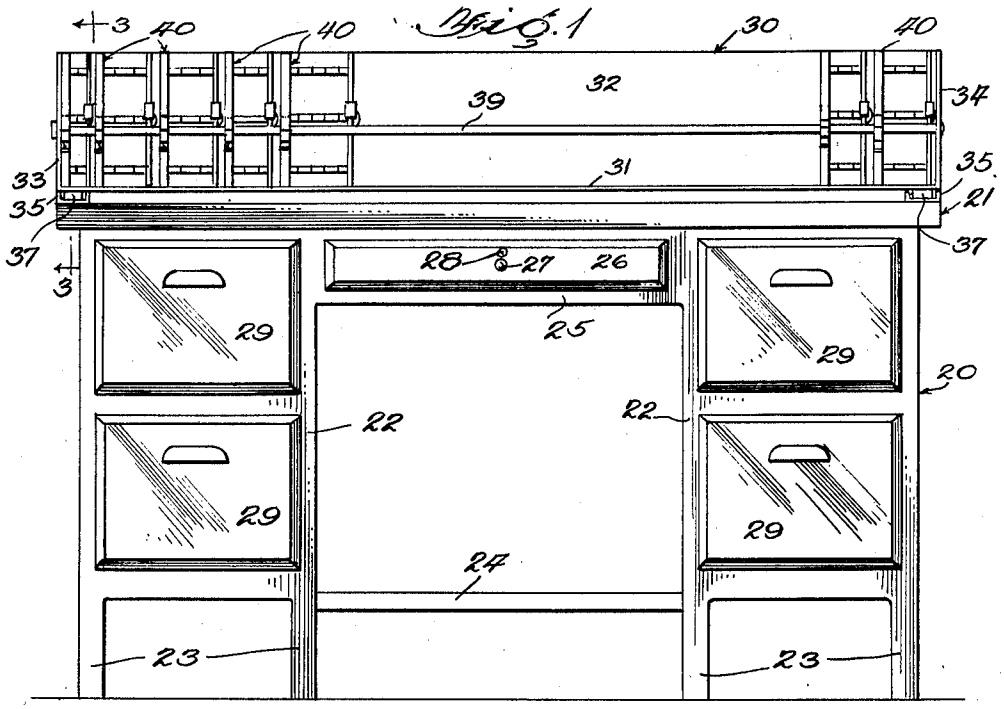



Fig. 1.

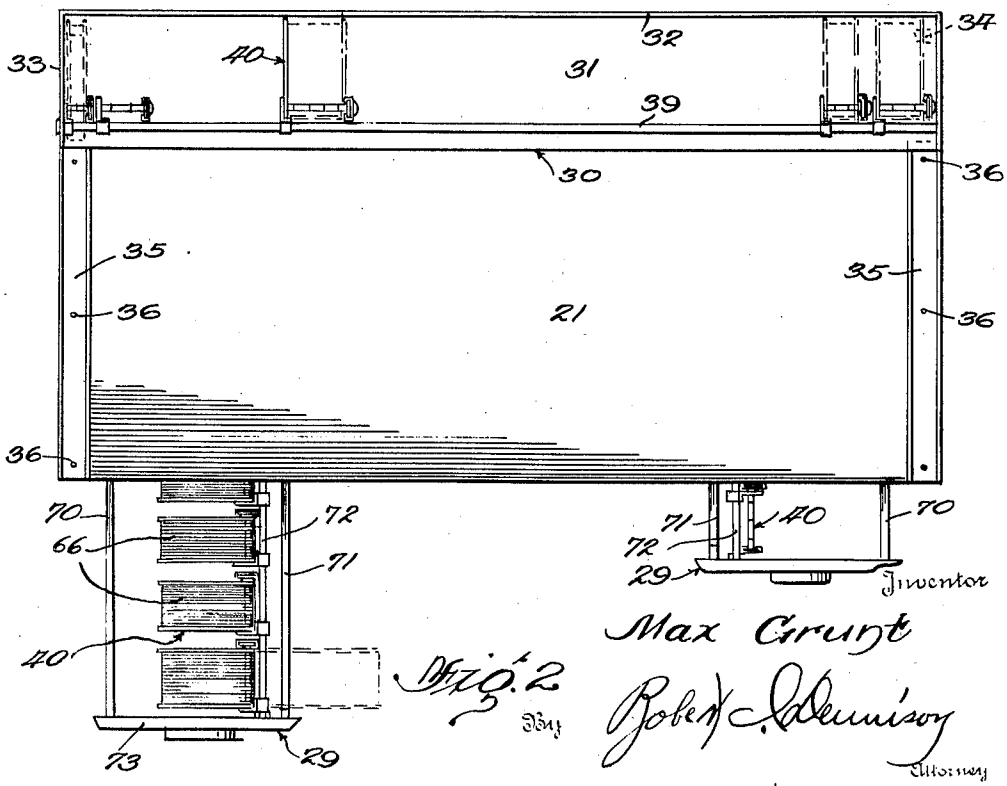



Fig. 2.

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FILING SYSTEM

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Fig. 4

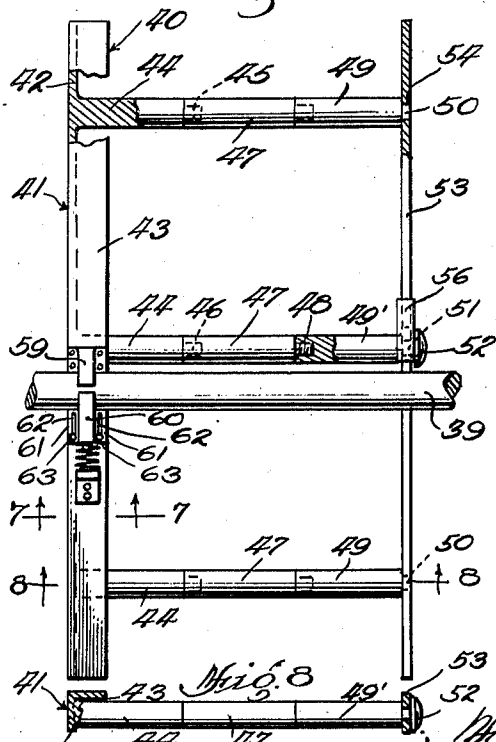



Fig. 5

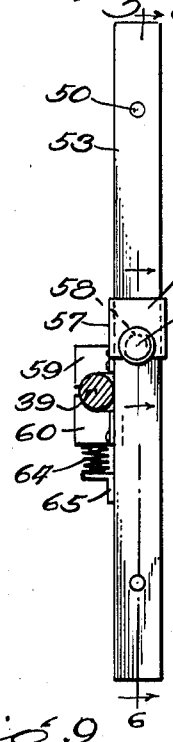



Fig. 6

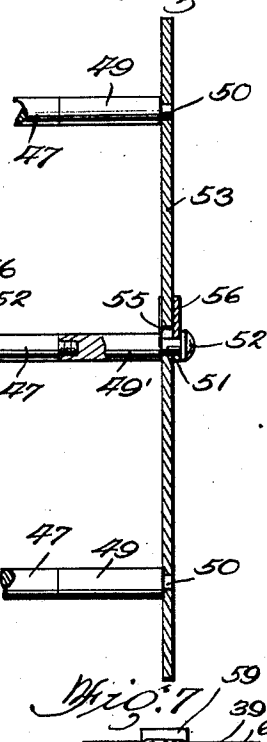



Fig. 8




Fig. 9

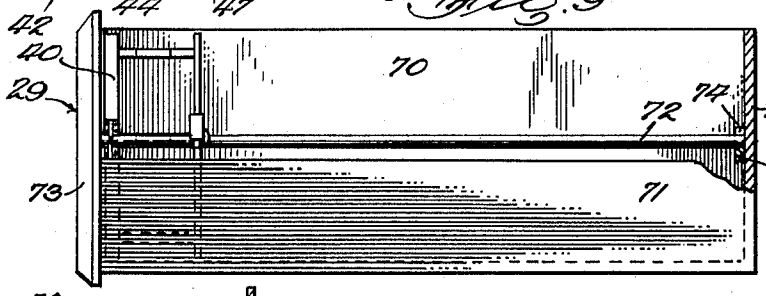



Fig. 7

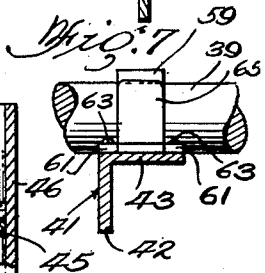



Fig. 3

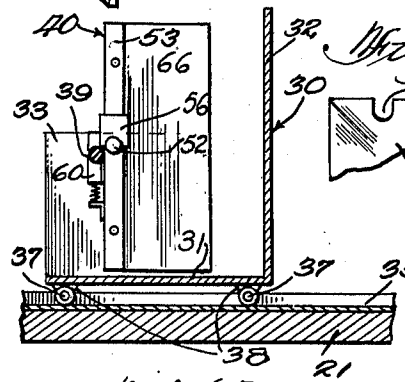
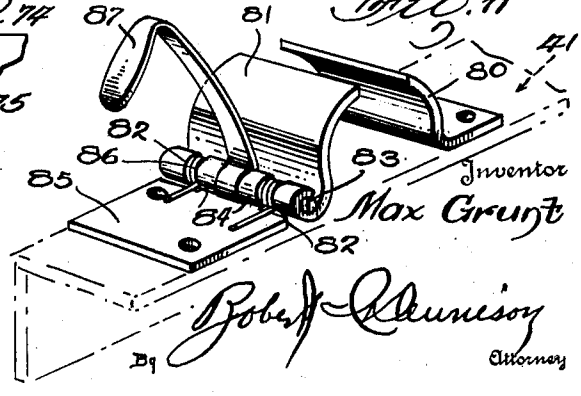



Fig. 10




Fig. 11




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# UNITED STATES PATENT OFFICE

2,326,029

## FILING SYSTEM

Max Grunt, Summit, N. J.

Application October 31, 1941, Serial No. 417,396

9 Claims. (Cl. 45—2)

This invention relates to an arrangement for keeping and filing records and more particularly to a supporting structure adaptable as a work desk simulating a more or less conventional office desk including readily accessible and operable mechanism materially simplifying handling of records of variable thickness and weight.

In record keeping, it is desirable that, wherever possible, loose-leaf or detachable leaf prepared sheets be employed for ready entry, shifting and filing and refiling. Depending upon the nature of the business to which the records may relate, not only may a plurality of readily accessible units or independent volumes be desirable but these may vary considerably in weight and thickness. Obviously, some of these records may require frequent handling, while others may be employed at only intermittent periods where reference to their contents may be only occasional. It may well be expedient furthermore to dispose certain records for ready availability while others may be stored for perusal or entry only on rarer occasions. At the same time, should any of these records become somewhat bulky, it is desirable that they may be handled readily, efficiently and with little time loss and expenditure of effort on the part of the record keeper or anyone inspecting the records. At the same time, under any of the aforementioned conditions, it may be desirable that such records be readily removable for filing changes, entry changes, or removal to permanent filing or storage, as the case may be.

Having these various desirable features in mind, it is one object of the present invention to provide a readily accessible centralized arrangement simulating an office desk or table providing a compact unit providing both for exterior visible filing and for concealed or inaccessible filing where it may be desirable to prevent inspection of certain records by unauthorized persons. To this end, there is provided a desk in general having the appearance of a conventional office desk embodying a substantial work surface and a plurality of filing and utility drawers, which may, if desirable, be secured and controlled from a central general utility drawer which may in turn be locked to secure all drawers in locked condition.

Another object resides in the provision of comparatively simple filing mechanism having features of ready attachment to and detachment from a master or main supporting rack which may have ready mobility relative to the desk for easier access for consultation, making of entries, removal, shifting and such other acts as may be performed in the course of general use so that an operator or user may bring the rack closer to him while seated at the desk or may shift the same away from him to provide him with a working surface of substantial and unobstructed area for work other than that related to filing and keeping records if necessary or expedient. Thus, there is provided a movable main rack in the nature of an open face carrier preferably of a width equal to, slightly less than or even greater than the longitudinal extent or lateral width of the desk top. To avoid unduly limiting the surface of the desk top and thus provide a maximum working surface, the rack is shiftable on guide rails or tracks supported on the desk top at the lateral edges. This carrier includes a suitable support to which one or more filing units may be readily applied and attached and which further may provide for quick lateral displacement to render any of the units shiftable to a position toward the center or near the center of the desk top. At the same time, the arrangement permits of disposing the units on the rack remote from the operator so as to be out of the way when other routine matters may be more advantageously performed on a broad surface.

A further object resides in the provision of expansible units lending themselves for quick assembly of filing forms and mounting and dismounting from the rack above mentioned. This is accomplished by readily variable length supporting studs or posts, quickly assembliable fastening elements for securing files together and to the rack, the latter securement or attachment also being effected in such a manner as to so support the filing units that they may be readily shifted to positions rendering any one accessible for opening or separating of individual file sheets in open book fashion and this with a minimum amount of effort. Preferably, the attachment means joining the units to the rack are arranged to provide a fairly balanced mount so that only a fraction of the weight of the unit and contents need be bodily moved for exposure of the files.

Another object is directed to employment of the desk drawers for similar filing and keeping racks having all the advantages of the visible or exposed files, yet, while providing for use of the entire interior of the drawers, will not render these drawers unduly bulky and awkward in handling. The arrangement provided for drawer application is such that only slight modification of a conventionally constructed desk drawer is necessary for its accommodation.

A further object contemplates the provision of

a quick detachable, simply operable pivotal connection for the filing units so that quick attachment to or detachment from the rack or drawer may be effected.

Other and further objects will appear from the following detailed description of several preferred embodiments of the invention illustrated in the accompanying drawings in which:

Figure 1 is a frontal elevation of a desk embodying a movable, visible, external surface support carrying filing units incorporating features of this invention, as well as drawers likewise including normally invisible filing units;

Figure 2 is a plan view of the arrangement shown in Figure 1 with some of the filing units removed and certain of the drawers opened to illustrate concealable filing units both file-containing and empty;

Figure 3 is an enlarged sectional view taken substantially along the line 3—3 of Figure 1;

Figure 4 is an enlarged elevation of a detachable filing unit embodying features of this invention with parts shown in section;

Figure 5 is a side elevation of the unit shown in Figure 4;

Figure 6 is a fragmentary section of one end of the filing unit shown in Figures 4 and 5, the section being taken along the line 6—6 of Figure 5;

Figure 7 is a further enlarged section of the filing unit taken along the line 7—7 of Figure 4;

Figure 8 is a section along the line 8—8 of Figure 4;

Figure 9 is an enlarged side elevation of a drawer embodying features of this invention with a portion thereof in section;

Figure 10 is an enlarged fragmentary elevation of a supporting bracket or plate associated with the drawer structure shown in Figure 9; and

Figure 11 is an alternative quickly manipulatable supporting connection for the individual units employed in attaching these units to a common support.

Referring more particularly to the drawings, there is disclosed a desk 20 having a preferably flat top side 21 and side depending drawer carrying sections 22 terminating in floor engaging legs 23. These sections 22 may be suitably united by connecting portions 24 and 25, the former serving as a foot-rest, while the latter, disposed adjacent to and under the top 21 may serve as a wide drawer supporting element carrying a general utility drawer 26. Drawer 26 may be provided with a pull knob 27 and, if desired, with any type of suitable or conventional key lock 28 whereby the drawer may be secured in closed position from unauthorized operation or opening.

Side sections 22 may each be provided with one or more drawers 29, which while shown preferably as of uniform size, need not be so, the size, shape and number varying according to need. Preferably, these drawers may be slidably supported in any conventional manner for withdrawal from the desk sections for ready accessibility to their interiors and the sections may be provided with suitable gang locking means preferably controlled by the open or closed position of drawer 26 so that with the latter closed and locked, the drawers 29 may likewise be closed and locked to prevent access to the contents thereof except by an authorized person.

The exteriorly accessible visible filing apparatus conforming to the present invention comprises a movable, traveling support or rack generally indicated at 30 comprising a bottom 31, a vertically directed back wall 32 and end walls 33 and 34 suitably secured to both bottom and back wall, thus leaving the carrier or rack open at the front (that is, toward a file operator or desk user) and top. Disposed on the top and preferably extending along both ends thereof fore and aft are tracks 35 of channel section (although some other preferred design might be employed) such tracks being suitably secured to the top in any desirable manner, although screws or bolts 36 are illustrated. The ends of the rack 30 are provided on the under side with a pair of aligned rollers 37 carried by brackets 38 either formed integrally or attached to the bottom in any suitable or desired manner. The rollers are of a size and shape best suited for accommodation to the tracks 35. Obviously, other types of suitably complemental tracks and rollers may be employed as long as they provide for proper guiding of the rack without any accompanying binding. Approximately midway of the end walls 33 and 34 adjacent the near edges thereof (the edges nearest a user) there is secured a transverse substantial rod 39 which provides for a two-fold purpose, that of substantially bracing the end walls of the rack and serving as a rail for a purpose which will be more fully apparent hereinafter.

For filing units generally indicated at 40 there is provided a novel arrangement consisting in each case of a main supporting element 41 preferably formed of angle material for greater rigidity, one flange 42 having a plurality of laterally directed integrally formed or otherwise secured trunnion-like studs 44, each terminating in a reduced end 45 which may be threaded. These threaded ends may receive the threaded sockets 46 of readily interchangeable extension studs 47 which may in turn have threaded reduced ends 48 for the reception of either further uniform extension studs or (as shown in Figures 4, 5 and 6), terminal studs 49, the top and bottom ones of which may have reduced ends 50 while the center one 49′ has a reduced neck 51 adjacent its free end which in turn terminates in a head 52. The studs and their extensions, if employed, serve as binding posts for filing sheets 60 suitably perforated for threading thereon. The reduced ends 50 and 51 receive thereon a limiting bar 53 provided with complemental recesses or apertures 54 for ends 50 and an enlarged aperture 55 sufficient to pass the head 52. Aperture 55 is so arranged with respect to apertures 54 and the head 52 is so disposed as to permit threading of the bar 53 over the head and onto the reduced portion 51 so as to require vertical upward shifting of the bar before threading of apertures 54 over ends 50. Thus, upon threading of the bar upon the reduced free ends of the studs, the lower edge of aperture 55 engages the under side of the reduced portion 51 providing rigidity for the binding-post assembly and at the same time not disturbing the parallelism of the plurality of posts. A catch plate 56 having side edge flanges 57 embracing the edges of bar 53 for slidable movement thereon, as provided adjacent its lower edge with downwardly directed slot or notch 58 of a width adapting it for frictional engagement with the reduced portion 51 of extension 49′ behind head 52 and such engagement presents a detachable yet rigid connection of bar 53 with the ends of the binding posts. With bar 53 fastened in place, the filing unit is rigid and so secured as to prevent accidental displacement while at the same time, the bar may be

quickly and readily removed for additions or removal of filed matter.

Each unit 40 is preferably removably attached to the rod 39 by a detachable connection comprising a downwardly hooked lug 59 rigidly supported upon flange 43 of the angle member 41 the under edge of the hook conforming to the contour of rod 39 which for the sake of providing a better pivotal connection, is circular in cross-section. This connection is completed by a slidable upwardly directed hook 60 having flanges 61 provided with parallel vertical slots 62 engaged over the shanks of beaded studs 63 carried by flange 43. One end, the upper of a coil spring 64 bears against the underside of the slidable hook 60, the lower end being anchored against the upper flange of a lug 65 suitably rigidly secured to flange 43 in alignment with hook 60. Thus, between hooks 59 and 60 they serve as opposed clamping jaws embracing rod 39. Due to the yieldability of jaw 60, the gripping action is accompanied by only slight friction permitting of ready pivoting of the unit 40 about rod 39 from a filing position shown in Figure 3 to one with the normally upper end of the unit in a position resting on the top of the desk whereupon the filed matter may be readily inspected. Since the lengths of the posts may be varied for convenience, the filed matter may be loosely carried by the posts to permit of opening in the manner of a book for making entries, if necessary or desired in the course of handling.

With the units 40 set in the position shown in Figure 3, the rack 30 may be moved from the position shown in Figure 2, forwardly or toward an operator or user to any desired proximity to such operator or user. Thus, inspection of or access to any of the files carried by the rack 30 may be had just as readily by a person seated at the desk as by one standing adjacent to it. Since the rack 30 may be moved away from the near edge of the desk to the far edge, with the filing units folded away, the major of the desk top is available for use in other routine matters.

To provide for readily concealable filing of matter or matter which need be inspected only infrequently, each of the drawers may also be arranged to receive filing units of the character above described. In adapting these units 40 to such a drawer 29, it is preferable that one side wall 70 extending the full height of the drawer while the opposite one 71 be of an extent somewhat less than half the depth of the drawer although this may be varied as occasion demands. A rod 72 similar in character to rod 39 of the exposed rack or carrier 30 is anchored at one end in a recess in the forward wall 73 of the drawer while the far end of the rod 72 may be removably nested in an upwardly directed notch 74 provided in a plate 75 secured to the inner face of rear wall 76 of the drawer. The file unit employed is in all respects like unit 40 and is normally disposed in filing position in the manner shown in full lines in Figures 2 and 9. When it is desired to have access to the enclosed or normally concealed filing unit, the drawer is opened and the unit swung about rod 72 toward the user until the angle member 41 and bar 53 rest upon the upper edge of the reduced wall 71 of the drawer when the unit contents or files may be separate or unfolded for perusal or access for making entries. Obviously, the reduced wall 41 of the drawer is preferably the one nearest the user so that this would be the right wall of the left section of drawers while it would be the left wall in the case of a drawer in the right section, as viewed in Figures 1 and 2. The inspection or access position of the unit is shown in dotted lines in Figure 2.

As illustrated, the file units in position of nonuse are disposed in vertically suspended position relative to rods 39 and 72. Thus when it is desired to inspect the filed matter, to make necessary entries or to withdraw or replace filed matter, any of the units may be readily rotated out of such position about the supporting rods when the carriers (either carrier 30 or drawers 29) are shifted to suitable access positions. Should it be desired to displace any unit for one reason or another, this may be simply and easily accomplished by shifting hook 60 and removing the unit from its associated rod. It may well be desired that the units be of uniform size in which case they would be readily interchangeable from the exposed file to any drawer and vice versa.

In the event that the arrangement is employed in a business or enterprise where the filing units must be often removed or replaced, there may be provided a simple readily accessible and operable connection such, for example, as shown in Figure 11. In this case, there is a rigid hook 80 suitably secured to the supporting element 41. Opposed to this hook is a movable hook 81 provided with barrels 82 carried on a hinge pin 83, carried in turn by a pair of ears or barrels 84 extending from a supporting plate 85 which may be suitably secured to the element 41. A spring 86 is so interposed between plate 85 and hook 81 about pin 83 to normally urge such hook toward hook 80. The spacing between these hooks is sufficient to properly embrace either rod 39 or 72 as the case may be. Hook 81 is further provided with a rigid handle extension 87 which is of a suitable length to be readily presentable for access when it is desired to remove the associated file.

Although in both forms of connecting hooks spring means are employed, the gripping action in both cases on the rods 39 and 72 is of such frictional extent as to permit of ready rotation of the filing unit about its support rod and at the same time, ready longitudinal sliding of the unit along the rod. Thus, any unit may be slid first and then rotated or rotated first and then slid along the rod. It should be noted that the rods 39 and 72 are sufficiently spaced from the opposite walls of the carrier and drawer to adequately clear such walls in rotation.

While there are disclosed several preferred forms of the invention, it is intended to be merely exemplary and not limiting. It should be apparent to those skilled in the art that variations may be resorted to without departing from the essence and spirit of the invention.

What is desired to be secured by Letters Patent is:

1. A filing desk comprising a base and a top, guiding means carried by said top, a carrier adapted to travel along said guiding means, a drawer in said base, a rod carried by said carrier, a rod carried by said drawer, and filing mechanism including means adapted to be slidably connected with each rod for interchangeable disposition of said filing mechanism.

2. A filing desk comprising a base and a top, guiding means carried by said top, a carrier adapted to travel along said guiding means, a drawer in said base, a rod carried by said carrier and said drawer, and filing mechanism including

means for selective pivotal attachment to each rod.

3. Filing mechanism comprising a movable carrier, a supporting rod on said carrier, a filing element comprising a main supporting element, filing posts carried by said supporting element, and a detachable connection for attaching said filing element to said rod, said connection comprising a bearing element hooking over said rod and a movable complemental element hooking under said rod and effecting with said bearing element a gripping bearing providing a pivotal connection with said rod.

4. Filing mechanism comprising a movable carrier, a supporting rod on said carrier, a filing element comprising a main supporting element, filing posts carried by said supporting element, and a detachable connection for attaching said filing element to said rod; said connection comprising a bearing element hooking over said rod and a movable complemental element hooking under said rod, pressure means adapted to cause said complemental element to yieldingly engage said rod and effecting with said bearing element a gripping bearing providing a pivotal connection with said rod, said bearing permitting at the same time, shifting of said filing element along said rod.

5. A filing element adapted to be detachably connected to a supporting pivot comprising a base element, an element carried by said base element and including a rigid hook adapted to pivotally bear on said pivot, a cooperating pivoting hook carried by said base element in opposition to said rigid hook, whereby both hooks may connect the filing element to the supporting pivot, means normally urging said pivoting hook toward said rigid hook, and a handle extension associated with said pivoting hook whereby the same may be shifted to readily disconnect said filing element from said supporting pivot.

6. In combination, a support, guiding means thereon, a carrier movable along said guiding means in one direction relative to said support, a second guiding means on said carrier, and filing mechanism having detachable means slidably and rotatably connecting said filing mechanism to said second guiding means whereby the filing mechanism may be disposed selectively either in said carrier or directly on said support.

7. A filing desk comprising a base and top, movable carriers in said base and on said top respectively, supporting means on each of said carriers, and filing mechanism including means for removably attaching said mechanism to said supporting means whereby said mechanism may be interchangeably disposed selectively on either of said carriers.

8. A filing desk comprising a base and a top, guiding means carried by said top, a carrier adapted to travel along said guiding means, a drawer in said base, a rod carried by said carrier, a rod carried by said drawer, filing mechanism adapted to be mounted on each rod, and means for interchangeably connecting said mechanism selectively to either rod whereby filed matter may be rendered accessible either on said top or at the drawer.

9. A filing desk comprising a base and a top, guiding means carried by said top, a carrier adapted to travel along said guiding means, a drawer in said base, a rod carried by each said carrier and drawer, and filing mechanism including disconnectible attaching means providing a connection with either of said rods whereby the filing mechanism may be selectively and interchangeably mounted on either of said rods.

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